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Canada. Ministry of State.
Science and Technology

News Release



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Ministry of State

Ministère d'État

for
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NEWS RELEASE

COMMUNIQUE

Ottawa
February 28, 1974

Throne Speech
Science Policy
Announcements



The government plans to strengthen the Ministry of State for Science and Technology in order to ensure a more efficient use of human resources and scientific activities in the pursuit of national goals.

Four specific steps comprise part of the plan to meet this objective. They are:

--Adoption of a precise definition as the

basis for science policy.

--Improvements in the structures which make financial grants.


--Provision for greater authority to the Ministry of State for Science and Technology.

--Better definition of the roles of the National Research Council, the Science Council and the Defence Research Board.

These immediate steps deal in large measure with the governmental and universities sectors.

The industrial sector, where studies have shown research and development to be weakest, is receiving priority attention in the development of additional thrusts.

Many studies of science organization in Canada during the last 10 years have focused attention on the need for science policy. The government has adopted the following definition:



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"Science policy is the rational generation and acquisition of scientific knowledge and the planned use of science and technology in support of national goals."

The government intends that the Ministry of State for Science and Technology exercise an enhanced advisory and coordinating authority.

This involves the formulation of national science policies, objectives and priorities to guide departmental planning and to serve as a basis for assessing expenditure proposals.

An aim is to ensure that government research is more closely tied to governmental objectives.

The government regards the provision of federal grants as essential in promoting research in the non-governmental

sectors, including universities.

The goal of the councils in distributing these grants is to support a balanced development of knowledge and of research capability.

In the context of this, the Councils must seek to encourage excellence in research, provide a base of advanced knowledge, assist in the concentration of research on areas of national importance, ensure that regional considerations are taken into account in the build-up of scientific capability, maintain a basic capacity for research

training, encourage curiosity-oriented research and encourage research with a potential contribution to national objectives.

These objectives now become common to all granting councils. Mechanisms will be adopted to coordinate their activities.

Changes in granting structures to be proposed to Parliament include the creation of a Social Sciences and Humanities Research Council and a Natural Sciences Research Council.

These changes will recognize the growing importance of the social sciences and humanities and will assist in improving the coordination of support to the natural sciences.

The National Research Council will relinquish the task of making grants but will continue to provide, through its laboratories and other activities, a research capability and a broadly-based source of expertise in natural sciences and technology.

NRC will be particularly oriented toward furthering economic, scientific and technological development in Canada but also will continue to work for the development of new knowledge.

The Science Council, which has concentrated on acting as advisor to the government, is to become a more national body with greater attention to its public information role.

The Defence Research Board laboratories and analytical functions will be fully integrated with the Department of National Defence. DRB's university granting function will be integrated into the activities of the granting councils.

area code: 613
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NEWS RELEASE COMMUNIQUÉ

Science and Technology
March 22, 1974 (U)

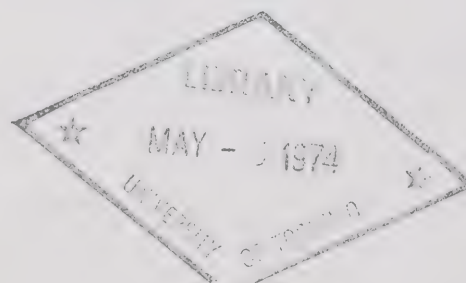
SCIENCE COUNCIL APPOINTMENT

Mme Jeanne Sauvé, Minister of State for Science and Technology, today announced the appointment of Mr. A. C. Cagney as a member of the Science Council of Canada for a three year period.

Mr. Cagney is President and Chief Executive Officer of Hermes Electronics Ltd. currently a leading Canadian company in the field of ocean engineering.

(biographical notes attached)

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A.C. CAGNEY

A graduate of the University of British Columbia in Chemical engineering, Mr. Cagney began a fifteen year association with the Proctor and Gamble Company in 1955. Serving in Canada and the United Kingdom, Mr. Cagney received considerable technical marketing and management experience in the fields of industrial chemicals and detergents, industrial food products and edible oils. During his association with the company, Mr. Cagney was a member of the United Kingdom Glycerine Producers Association and the Edible Oils Institute of the United Kingdom.

On leaving Proctor and Gamble, in 1968, Mr. Cagney became President of the American Sterilizer Company of Canada, a post he held until 1972.

Mr. Cagney is currently President and Chief Executive Officer of Hermes Electronics Limited, a leading Canadian Company in the fields of Ocean Engineering and the production and development of high frequency communications systems.

from the Minister of State
for Science and Technology
the Hon. Judd Buchanan

For release

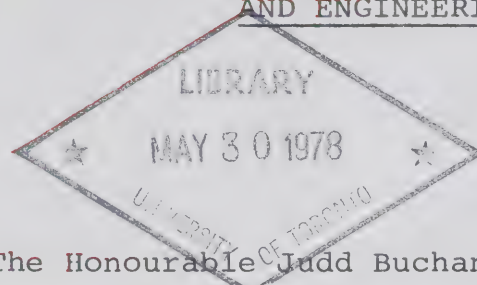
**Government
Publications**

May 5, 1978
12:00 p.m.

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MEMBERS NAMED TO NATURAL SCIENCES

AND ENGINEERING RESEARCH COUNCIL



OTTAWA -- The Honourable Judd Buchanan, Minister of State for Science and Technology, today announced the membership of the Natural Sciences and Engineering Research Council. Mr. Buchanan said, "The Council is representative of national interests in science and technology. The members have been selected in each case for their broad awareness and perspective of the vital role that science and technology play in Canadian society."

The Council began its work on May 1, 1978 and assumes the role of financing university research, formerly the responsibility of the National Research Council. The Natural Sciences and Engineering Research Council has a president and 21 members, drawn not only from universities across Canada, but also from industry and public affairs.

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Minister of State

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The new President, to serve for a five year term starting May 1, 1978, is Mr. Gordon MacNabb. Formerly Deputy Minister of the Department of Energy, Mines and Resources, he trained at Queen's University as a civil engineer. He has wide experience at senior levels in government administration and extensive knowledge of the operations of the large science and technology research establishments within his former department.

Members are drawn from senior research or administrative positions in universities and from the principal industrial and social sectors. The members already named are:

Dr. Angus Bruneau, Vice-President, Memorial University, St. John's, Newfoundland;

Dr. Brian T. Newbold, Professor, University of Moncton, Moncton, New Brunswick;

Mr. Kent Sweeney, President, Lawrence Sweeney Fisheries Limited, Yarmouth, Nova Scotia;

Dr. Pierre Dansereau, Professor, Université du Québec à Montréal, Montréal, Québec;

Dr. Larkin Kerwin, Professor, Laval University, Quebec City, Quebec;

Dr. Virginia I. Douglas, Professor, McGill University, Montreal, Quebec;

Mr. Jacques Giasson, President and Chief Executive Officer, St. Lawrence Cement Company, Montreal, Quebec;

Mr. Joe Morris, Past President, Canadian Labour Congress, Ottawa, Ontario;

Dr. William S. Fyfe, Professor, University of Western Ontario, London, Ontario;

Dr. Arthur N. Bourns, President, McMaster University, Hamilton, Ontario;

Dr. Ursula Franklin, Professor, University of Toronto, Toronto, Ontario;

Mr. Larry D. Clarke, Chairman and Chief Executive Officer, Spar Aerospace Products Limited, Toronto, Ontario;

Dr. Henry E. Duckworth, President, University of Winnipeg, Winnipeg, Manitoba;

Dr. Lloyd A. Barber, President, University of Regina, Regina, Saskatchewan;

Dr. Robert B. Church, Professor and Head, University of Calgary, Calgary, Alberta;

Mr. Alistair H. Ross, President and Director, Pembina Pipe Line Limited, Calgary, Alberta;

Dr. Michael Shaw, Vice-President, The University of British Columbia, Vancouver, British Columbia;

Dr. Norman B. Keevil Jr., Executive Vice-President and Director, Teck Corporation Limited, Vancouver, British Columbia;

Mr. Thomas A. Buell, President and Chief Executive Officer, Weldwood of Canada Limited, Vancouver, British Columbia.

Two members are still to be appointed from the business and social sectors of Quebec to complete the Council, and they will be announced soon.

The Natural Sciences and Engineering Research Council (NSERC) was created by the Government Organization (Scientific Activities) Act, 1976, passed in June 1977. This Act was intended, not only to re-organize the three granting councils for federal funding of university research, but to provide an opportunity for a re-assessment and re-orientation of university research activity in Canada.

The Minister said: "The new Councils will be encouraged to foster excellence in research, to provide a base of advanced knowledge through the support of curiosity-oriented or basic research, to encourage research that contributes directly to national goals, to foster inter-disciplinary research to provide for regional balance of scientific capabilities in Canada, and to assist in the establishment of centers of excellence and centers of concentration in specific research areas. They are also to maintain a basic capacity for research training in universities, through scholarships and other awards."

For further information: Natural Sciences and Engineering
Research Council office - Ottawa
(613) 993-0029



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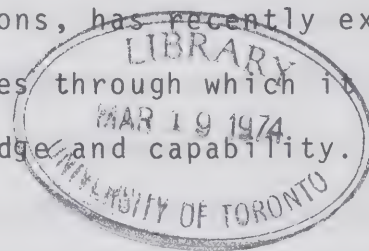
NEWS RELEASE COMMUNIQUÉ

Canada Ministry of State for Science and Technology

Statement by Mme Jeanne Sauvé

Minister of State for Science and Technology

The increasing impact of science and technology upon the welfare and prosperity of mankind has kindled world wide interest. Canada, in company with other technologically advanced nations, has recently examined the organization and procedures through which it develops and employs scientific knowledge and capability.



The Senate Special Committee on Science Policy has completed a very major study of the whole subject, and in addition, there have been other valuable studies such as that made by the OECD.

The government has given serious consideration to these studies and has reached the conclusion that sufficient evidence has been brought forward to justify a number of important decisions.

The changes which are presaged in the Speech from the Throne are primarily organizational and are aimed at a more efficient deployment of Canadian scientific manpower and resources. It is inevitable however that any change in organizations of long standing may be construed by some as criticism of these organizations. Such criticisms are certainly not intended and would be totally unjustified. The agencies involved in the proposed changes, primarily the NRC, Canada Council, DRB and the Science Council, have all achieved high recognition and the NRC in particular must be credited with the responsibility for encouraging and supporting the development of Canada's present high level of scientific competence.

Events are however moving fast and the requirements of the nation call for new policies in science and technology as in other fields. The powerful capabilities of Canadian federal science agencies need to be redirected towards new goals and their organizational structure must adjust to new circumstances.

The Development of Science Policy.

Science policy has been described in the Throne Speech as a basis for "the rational generation and acquisition of scientific knowledge and the planned use of science and technology in support of national goals". The furtherance of this policy objective provides the basic *raison d'etre* of the Ministry of State for Science and Technology.

As the Throne Speech indicates, the Ministry is to have a strengthened role. Its advice will increasingly be taken into account by Cabinet in relation to new science oriented policies many of which will originate in the operating departments, while others will be initiated within the Ministry itself. Its impact will also be markedly increased in relation to the assessment of scientific programs and associated expenditures. Close cooperation between the

Ministry and Treasury Board is developing in these areas and it is the intention to focus attention, not only within the government itself, but also in the public domain on the distribution and extent of expenditures in science and technology. This should assist Canadians to understand and to make sensible judgements regarding the way in which scientific and technological resources are being used and also help them to appreciate changes in the direction and emphasis in programs.

The Granting Councils.

The government feels that on the basis of the advice that it has received the background, methods and objectives of the three existing granting councils differ to such an extent that the overall efficiency of the granting system is less than optimum and there is a danger that some important objectives such as the encouragement of multi-disciplinary research may receive insufficient emphasis.

The reorganization proposed involves separating the granting function of the National Research Council from the laboratories of the Council and, while leaving the laboratories under the existing title, giving responsibility

for the grants to a new council entitled "The Natural Science Research Council".

The second change involves separating the social sciences and humanities from the existing Canada Council and, while leaving the present Canadian Council the responsibility for support of the arts, establishing a new granting council for the social sciences and humanities.

The last of the existing three councils, the Medical Research Council, will remain unchanged and thus the new Council organization will consist of:

The Natural Sciences Research Council,
The Medical Research Council, and
The Social Sciences and Humanities Research Council.

As a means of ensuring effective collaboration among these Councils, it is proposed that there shall be an inter-council coordinating committee, chaired by the Secretary of the Ministry of State for Science and Technology and reporting to the Minister of State for Science and Technology.

National Research Council.

When the proposed legislation is approved then the National Research Council will no longer have a granting function but will maintain responsibility for operating its laboratories and associated functions.

The NRC will be oriented toward furthering economic, scientific and technological development in Canada. It will also continue to work for the development of new knowledge to which it has made great contributions in the past.

Science Council of Canada.

The Throne Speech proposes that the Science Council Act be amended to give the Council a set of clear, broad objectives with a national orientation and a public information role. During its early history the Science Council concentrated to a major extent on providing advice to the federal government. The establishment of the Ministry of State for Science and Technology has required a clearer definition of the roles of the two organizations. It has also become apparent that there is a need for a board of experienced scientists who can take a national position outside the framework of the federal government, maintaining close relationship with all sectors and reflect their interests, opinions and judgment. To this end

the government will put forward legislation to amend the present terms of reference of the Council.

The Defence Research Board.

In its 25 year history the Defence Research Board has provided an invaluable service to the Department of National Defence at a time when defence science was in its period of most dynamic growth. Changes in the role of the Department of National Defence, unification of the Forces, and reorganization which have taken place over the past few years have led to a situation in which the present structure of the Defence Research Board no longer fits comfortably into the overall structure of the Department. The demands for scientific capability remain high and the resources of the Board are a valuable asset to the Department. The present organization however owes its form to the National Research Council on which it was modelled, and it now seems appropriate to accept the scientific component of National Defence as being an integral part of the main structure. The government will therefore propose that the scientific and analytical staff and facilities of the Board be integrated into the general technical arms of the Department. The Board's present granting function will be integrated into the activities of the granting councils.



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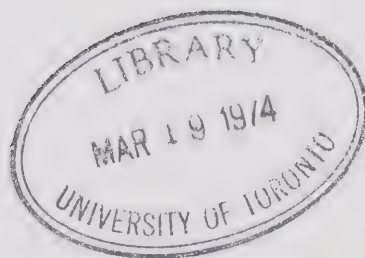
NEWS RELEASE

COMMUNIQUE

*Canada, Ministry of State for Science and
Technology*

THRONE SPEECH 1974

MOSST INFORMATION KIT



1: BACKGROUND

Federal government support for scientific activities in the past has taken the form of grants-in-aid, scholarships and bursaries, post-doctoral fellowships, contracts and negotiated grants to universities. The bulk of this assistance has been administered by three granting councils, each with its own objectives, adjudication procedures and methods of operation.

Each of the councils has a disciplinary orientation which has consistently been reflected in the pattern of awards. The National Research Council deals with research in the natural sciences with the exception of the health sciences which are under the jurisdiction of the Medical Research Council. The Canada Council, the third granting agency of the federal government, supports the arts and research into the social sciences and the humanities.

Generally, the councils have been successful in achieving their major objectives. However, the disciplinary approach to financial assistance, has not produced sufficient balance among the various research disciplines. Further, the increasing importance of inter-disciplinary research demands increased financial assistance to this field of endeavour.

There is still a need for financial assistance programs on a disciplinary basis. At the same time, however, there is a growing and increasingly urgent need for a stronger co-ordination of the granting councils to assure support of a balanced development of knowledge and of research capability.

The federal government has identified common objectives shared by the granting councils. The councils should encourage excellence in research, curiosity oriented research as well as research that may contribute to the achievement of national objectives. They must also provide a base of advanced knowledge, assist in the selective concentration of research activities and maintain a basic capacity for research training. Finally, the granting councils should take account of regional considerations in scientific capability.

These objectives represent a substantial expansion in the scope of granting councils activities. If the councils are to be successful, certain organizational changes are considered necessary.

2: THE NATIONAL RESEARCH COUNCIL

The National Research Council (NRC) was established as a Crown Corporation reporting to the President of the Treasury Board. Traditionally, NRC has been both a granting agency and a national laboratory.

As a granting agency, NRC gives grants-in-aid to university research in the natural sciences and engineering and provides scholarship and bursary funds to students performing research and proceeding to advanced degrees in these disciplines. The council also provides post-doctoral fellowships through an industrial post-doctoral fellowships program established in 1970-1971. Negotiated development grants are also awarded to universities to enable them to build up strength in specific fields. In 1973, \$78.1 million was awarded to organizations outside the federal government.

As a national laboratory, NRC has three divisions engaged in basic and applied research in the natural sciences and four divisions devoted to engineering. NRC administers an industrial research program, the National Science Library and the Technical Information Service.

Most studies of federal government science support have recommended the separation of the granting function of NRC from the Laboratory and other responsibilities on the premise that the management of both would be enhanced. The Special Senate Committee on Science

Policy in particular stressed that the separation was necessary if only to allow the NRC more time and more of its resources and manpower to devote to the laboratory function.

The granting function of NRC is highly respected in the science community and the agency has performed its task well. However, there is an increasing interaction among scientific disciplines and activities and, therefore, a need for better co-ordination with other granting bodies.

Legislation will be introduced in Parliament establishing a new granting agency named the Natural Sciences Research Council. The new agency will have a disciplinary approach but will be co-ordinated with the other granting councils through the Inter-Council Co-ordinating Committee.

The National Research Council will continue to provide a research capability and a broadly based source of expertise in the natural sciences and technology. In furthering economic, scientific and technological development in Canada, the NRC will concentrate on the solution of problems of national concern. The agency will continue to work also for the development of new knowledge.

3: THE MEDICAL RESEARCH COUNCIL

The Medical Research Council (MRC) has traditionally provided financial support for research in the fields of medicine, pharmacy and dentistry. The council has reported to the Minister of National Health and Welfare.

Financial Assistance from the NRC normally is in the form of grants-in-aid and post-doctoral training fellowships. Salary support is sometimes given to a limited number of highly qualified career researchers in the universities. In 1973, \$37.5 million was awarded by MRC.

Like the NRC, the Medical Research Council now is faced with an increasing amount of inter-disciplinary research. To better fulfill the objectives of federal science policy, therefore, the MRC's granting operations will be co-ordinated with those of other granting councils through the Inter-Council Co-ordinating Committee.

The Special Senate Committee on Science Policy suggested that the MRC assume responsibility for all biological sciences, some of which now are under the jurisdiction of the National Research Council. This suggestion was based on the premise that Biology has a closer relationship to Medicine than to the physical sciences. The Science Council disagreed with this suggestion and recommended that Biology still be a part of the NRC granting mandate. The federal government, recognizing the importance of the relationship between Biology and

other natural sciences will leave the present Medical Research Council functions undisturbed. The MRC, however, will be placed in an appropriate relationship to the Inter-Council Co-ordinating Committee.

4. THE CANADA COUNCIL

The Canada Council was established in 1957 as a foundation for the support of the arts and research into the social sciences and humanities. Support from the Canada Council normally has been in the form of fellowships, and grants to researchers in the social sciences and humanities and grants in support of the arts. In 1973, \$21.7 million was given for research in the social sciences and humanities.

The Special Senate Committee on Science Policy, as well as studies by other groups and organizations, recommended that the responsibility for financial support to the social sciences and humanities be separated from the program for the support of the arts and that a new granting agency be formed. Professional associations of researchers in the social sciences and humanities have supported this suggestion because it would put these disciplines on an equal footing with the natural and health sciences.

Unlike the NRC and the MRC, members of the Canada Council have not always been experts in the fields supported by the council. The social sciences and humanities support program has been administered separately from the arts program.

The federal government has decided to separate the social sciences and humanities granting functions from the Canada Council and to establish a new agency, the Social Sciences and Humanities Research Council. The new agency will have the same relationship to the

Canada Council (Continued)

Inter-Council Co-ordinating Committee as do the National Research Council and the Medical Research Council.

5: THE INTER-COUNCIL CO-ORDINATING COMMITTEE

Throughout the past decade, numerous studies of the federal government's support for scientific activities have recommended better co-ordination of financial assistance programs and increased emphasis on inter-disciplinary research. Generally, although the granting councils have performed their assigned tasks well, it was felt that three inherent weaknesses had developed in granting council practices over the years.

The current granting councils, because of their disciplinary approach and the resultant adjudication procedures, did not succeed in adequately covering all recognized research disciplines. This has resulted in greater research strength in some fields at the expense of others. Moreover, interdisciplinary research has not been sufficiently co-ordinated.

Secondly, the differences between the councils in terms of mechanisms of support and adjudication procedures caused some confusion among university administrators and researchers.

These weaknesses are not the result of a failure on the part of granting councils, but is a reflection of developments that have occurred in scientific research since the original formation of the

present granting councils. The weaknesses do indicate, however, the need for a stronger co-ordinating body designed to ensure balance to Canada's research efforts.

Accordingly, the federal government will establish an inter-Council Co-ordinating Committee to:

1. advise on the allocation of funds among the councils;
2. ensure coverage by the councils of all recognized disciplines;
3. standardize granting practices;
4. ensure that the needs of inter-disciplinary research are met;
5. co-ordinate and advise on council programs, as well as those of individual federal government departments, in support of university research.

The Inter-Council Co-ordinating Committee will be chaired by the Secretary of the Ministry of State for Science and Technology and will include in its membership, the heads of the granting councils and certain other senior officials to be named later. The committee will report to the Minister of State for Science and Technology.

6. MOSST AND FEDERAL GOVERNMENT SCIENCE ACTIVITIES

The Ministry of State for Science and Technology is a key element in the revised organization of federal science activities.

Essentially, there are four parts to MOSST's involvement with these activities:

1. the development of a science policy framework to provide guidance on scientific activities to all departments and agencies in terms of science objectives priorities and strategies;
2. the development of annual science expenditure guidelines for use by departments, agencies and Treasury Board;
3. the development of formal arrangements with Treasury Board for collaboration in the preparation of a science budget display and in the analysis of expenditures and program proposals;
4. an annual assessment of accomplishments in federal government science activities.

1. Science Policy Framework

If a meaningful evaluation of proposals for scientific programs and expenditures is to be made, it must be done in the context of overall science objectives and priorities. MOSST, in its role as primary advisor on science activities and expenditures, will be responsible for the development of a science policy framework against which individual policies can be viewed. Until this framework is erected, however, the advice MOSST can give will be limited in scope.

2. Science Expenditure Guidelines

Once national science objectives have been developed, annual science expenditure guidelines could be used by all departments and agencies as well as by Treasury Board and MOSST itself. Examples of factors that may be covered by the guidelines include purchasing policy, decentralization of government laboratories, regional dispersion of scientific activities and the research-development mix. These guidelines would have to be co-ordinated with the overall expenditure guidelines developed in Priorities and Planning.

3. Science Budget Display

During the 1974-75 program forecast last spring, a display of expenditures for scientific activity was begun by Treasury Board Secretariat and MOSST. Trends in these expenditures were examined as a first step in analysing scientific expenditure proposals. Action has already begun to improve the collaboration between these two departments in subsequent years. The display will be used for the evaluation of departmental and agency budgetary proposals for scientific activity. MOSST will evaluate these proposals prior to final consideration and approval by Treasury Board and publish annually a report analysing federal expenditures on science and technology.

4. Assessment and Analysis

Each year, MOSST will analyse federal scientific activities in the light of the new expenditure guidelines and general federal government spending on science activities.

7: SCIENCE POLICY FOR CANADA

Science organizations and scientific activities must be based on a definition and understanding of what is meant by "science policy." Such a definition should make it clear that the scientific and technological activities of the federal government are not to be considered as ends in themselves but rather as a means for the achievement of national goals.

Both the Organization for Economic Co-operation and Development and the Special Senate Committee on Science Policy have suggested definitions for science policy in the past.

The recent changes in the organization of federal scientific activities are based on the definition of science policy as:

"the rational generation and acquisition of scientific knowledge and the planned use of science and technology in support of national goals."

8: THE DEFENCE RESEARCH BOARD

The Defence Research Board (DRB) was established in 1947 under an amendment to the National Defence Act as an advisory body on scientific matters to the Minister of National Defence. The Board's mandate includes scientific research into matters relating to national defence and the development of improved facilities and equipment for use by the Department of National Defence. The Board also has the power to give grants-in-aid to universities and industries carrying out national defence research. Individual researchers may also receive assistance in the form of scholarships for defence research. In addition, the Board maintains extensive facilities for in-house research.

The relationship of the DRB to the Department of National Defence has been a close one although responsibility for granting rests with the Board and its Advisory Committee made up of scientists drawn from relevant disciplines.

In accordance with the government's policy of having government research relate closely to national objectives, the Defence Research Board's laboratory and analytical functions will be integrated

fully with the Department of National Defence. The granting functions of the board, to enhance the co-ordination of federal scientific activities, will be absorbed by the three other granting councils, the Natural Sciences Research Council, the Medical Research Council and the Social Sciences and Humanities Research Council.

9. THE SCIENCE COUNCIL OF CANADA

The Science Council of Canada was established to provide the federal government with advice on Canada's scientific, and technological resources, potential and requirements.

The Special Senate Committee on Science Policy recommended several changes in the structure and mandate of the Science Council based on the assumption that, since the creation of the Ministry of State for Science and Technology, the Science Council has been without a definitive role in the science policy formulation process.

Since its establishment, the Science Council has dealt primarily with the programs and policies of the federal government. While this role is a key element in the mandate of the Science Council, the government will encourage the Science Council to provide advice, not only to the federal government, but to the university and industrial sectors as well.

In addition, to promote a better understanding of science policy issues, the government feels that the Science Council should adopt an active public information role. This new activity of the council is essential to decision-making on science policy in all sectors.

To effect these changes, the Science Council Act will be amended to provide a set of clear, broad national objectives and a public information and education function.

PRESS RELEASE

from the Minister of State
for Science and Technology
the Hon. John Roberts

For release May 6, 1980
9:00 a.m.

SCIENCE MINISTER CONFIRMS FUNDING INCREASE FOR NATURAL SCIENCES AND ENGINEERING RESEARCH COUNCIL

OTTAWA---The government has confirmed an increase in the 1980-81 budget of the Natural Sciences and Engineering Research Council (NSERC) of \$41.8 million (or 35 percent) to a total of \$162.6 million, the Minister of State for Science and Technology and Minister of the Environment, the Honourable John Roberts, announced.

The Minister made the statement in an address to the Canadian Association of University Research Administrators (CAURA) meeting in Ottawa. "The government places a high priority on strengthening the Canadian R&D effort, and has reaffirmed in the Speech from the Throne its target of increasing the level of Canadian R&D expenditures to 1.5 percent of GNP. The government recognizes that the universities are an indispensable element in Canada's research effort and that NSERC plays an important role in support of that effort," Mr. Roberts said.

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"The increase in the budget will enable the Council, with the cooperation of the universities and the provinces, to increase training of highly qualified manpower to meet the country's need for trained researchers. It will also promote improved links between university and industrial research; expand its support of strategic research in areas of national concern; maintain a foundation of fundamental research in universities; and better equip university laboratories whose scientific equipment has become obsolete over the past years."

The budget increases for the Councils are only part of the government's total R&D expenditures increase for 1980-81. The total increase in the federal funding for science and R&D is \$155 million.

Further to this the Minister indicated that: "To keep the government's R&D expenditures in line with the government's goal of 1.5% of GNP by the mid-1980's, funds totalling approximately \$185 million will be required in 1980-81. I am committed to seeking this money and I am optimistic that funds for science expenditures will be increased by the requisite \$30 million to meet our R&D target".

PRESS RELEASE

from the Minister of State
for Science and Technology
the Hon. John Roberts

For release

May 29, 1980
2:00 p.m.

Government
Publications



NEW PRESIDENT APPOINTED FOR NATIONAL RESEARCH COUNCIL

OTTAWA---The Honourable John Roberts, Minister of State for Science and Technology and Minister of the Environment, announced today the appointment of Dr. Larkin Kerwin as President of the National Research Council of Canada.

Born in Quebec City, Dr. Kerwin was educated at St Francis Xavier, Toronto, the Massachusetts Institute of Technology and Laval. After a distinguished career in teaching and research, he became Vice-Rector of Laval in 1969 and Rector in 1972, a post which he held until 1977. He was elected Vice-President of the Natural Sciences and Engineering Research Council when that body was formed in 1978. Dr. Kerwin is a fellow of the Royal Society of Canada and was its President in 1976. He is active in national and international organizations.



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Mr. Roberts said, "I am extremely pleased by Dr. Kerwin's willingness to serve as President of NRC. He ranks among our most distinguished scientists".

"The development of Canada's scientific capabilities and the use of science and technology in support of national goals are among the principal priorities of the government. I expect that Dr. Kerwin will make a major contribution towards the achievement of these objectives", the Minister said.

Mr. Roberts also paid tribute to Dr. W.G. Schneider who after many years of service with NRC, for the past 12 years as President, is now retiring. "Under Dr. Schneider's leadership, the NRC was consolidated and extended its reputation as one of the foremost research organizations in the world. Dr. Schneider's distinguished leadership of the Council has been largely responsible for this achievement. Dr. Schneider's great contributions both to the National Research Council and to the Canadian scientific community are immeasurable".

For further information: Françoise Rhéaume
Communications Services Division
(613) 995-3093

PRESS RELEASE

from the Minister of State
for Science and Technology
the Hon. John Roberts

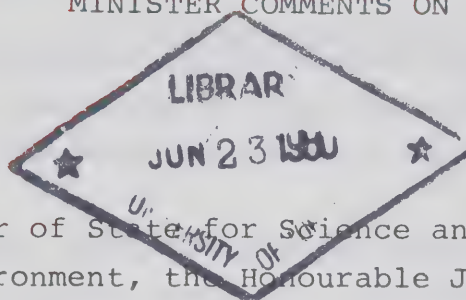
For release

June 16, 1980
Noon

Publications

MINISTER COMMENTS ON QUEBEC'S WHITE PAPER

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QUEBEC---The Minister of State for Science and Technology and Minister of the Environment, the Honourable John Roberts, said today at Laval University, that the federal government could respond to the objectives of the science policy proposed in the Quebec White Paper on Scientific Research through policies and programs already in existence at the federal level. The Minister was addressing the Association of Universities and Colleges of Canada (AUCC) Council of University Presidents.

Mr. Roberts stressed that science should act as a unifying and not divisive force and he hoped it would open up new avenues of cooperation.

Commenting further on the White Paper the Minister said that the history of science demonstrates clearly that science cannot be divided on the basis of jurisdiction. Therefore, it was in the interests of all Canadians that the federal government nourish science across the country and promote collaboration wherever possible.

The Minister also pointed out that the government's commitment to meet the 1.5 percent of GNP target for R&D expenditures by the mid-1980's will have major implications for the universities.

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The implications are:

- the universities will be expected to supply increasing numbers of highly qualified manpower to avoid a serious shortfall particularly in the applied fields;
- to avoid a dilution of effort among our universities, hard choices will be necessary to increase concentration and specialization of research;
- the universities links with industry will be improved and strategic programs directed at problems of national interest further developed;
- basic research carried out in the universities will continue to be of vital importance to Canada.

Mr. Roberts said that he looked to the AUCC to encourage the universities in meeting the challenges created by the government's 1.5 percent R&D target.

For further information: Françoise Rhéaume
Communications Services Division
(613) 995-3093

**from the Minister of State
for Science and Technology
the Hon. John Roberts**

For release October 21, 1980
1:00 p.m.

Government
Publications

MINISTER OUTLINES

NEW DIRECTIONS FOR THE

SPACE PROGRAM IN THE 1980's

OTTAWA -- In a speech delivered from Vancouver via satellite to the first Canadian Conference on Astronautics in Ottawa Tuesday, the Minister of State for Science and Technology, the Honourable John Roberts noted that the 80's look as promising as the 70's for Canada's space program.

As the Minister responsible for space R&D policy and development, Mr. Roberts stated that achievement of this potential will require a restructuring of the government's space activities and extensive consultation and joint planning with industry.

Mr. Roberts outlined the key features which he believes should be emphasized in the new organization for space:

The new organization would have:

- responsibility for a national space development program to afford greater policy stability,
- responsibility for a budget for space programs with authority to recommend program priorities,
- responsibility for fostering the continuing development of a healthy Canadian space manufacturing and service industry,



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and would provide:

- a focus for Canadian international co-operation and negotiation in space matters,
- consolidation of existing technical expertise and marketing of benefits to potential government and non-government users of space technology.

The Minister said that "the government is restructuring its space activities and also revising its five-year space plan, two major events happening this fall which will be dominant factors in shaping the Canadian Space Program in the 1980's."

The Minister indicated that the driving assumptions behind the development of a revised plan are that Canada will need new satellite services in communications and remote sensing in the 1980's. This would allow us to build on our existing strengths and lead to system level initiatives in the near future. The planning also recognizes the importance of technology development and covers "the long-term investment in R&D required for the success of the space program."

Mr. Roberts concluded that Canada was in a strong position to capitalize on the opportunities offered by space in the 80's because of the strong foundation built in the 70's. He noted that continued growth is likely and will "come more and more from commercial activities, both domestic and international, as the use of space becomes more commonplace in Canada and around the world."

For further information:

Barbara Zatlokal
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Ministry of State for Science and Technology
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PRESS RELEASE

from the Minister of State
for Science and Technology
the Hon. John Roberts

For release September 22, 1980
11:00 a.m.

Government
Publications

MINISTER ANNOUNCES NEW SPACE POLICY ORGANIZATION

TORONTO---Following the Prime Minister's announcement in July that the responsibility for space policy would be transferred to the Ministry of State for Science and Technology, the Honourable John Roberts, Minister of State for Science and Technology announced today that the Secretariat for the Interdepartmental Committee on Space will be officially transferred to the Ministry from the Department of Communications on October 1, 1980. The Secretariat will assist in the coordination of the planning and operations of space research and development between departments.

"I will be according a high priority in this critical area. The mandate given to me for space policy represents a significant step in implementing the government's commitment to further research and development in Canada and to promote the exploitation of advanced technology", the Minister said. "These changes will provide a strong central focus within the government in the development of space policy and programs and will bring about strengthened industry-government relations in this area".



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Dr. David Low, Assistant Secretary to the University Branch of the Ministry, has been appointed Chairman of the Interdepartmental Committee on Space. He will also be responsible for space policy development within the Ministry. Dr. Low, who has been Acting Chairman of the Committee for the past year, will be assisted in his new responsibilities by Mr. M. Evans, a senior official of the Ministry.

The Minister has been asked to present to government a long-term space program which is fully supportive of Canadian industry. A five-year plan was published by the Interdepartmental Committee on Space in January which outlined, in preliminary form, a long-term strategy for program development and resource allocation in this area. The Minister has asked Dr. Low to revise the five-year plan in the light of new projects and developments and submit recommendations to him after consultation with industry. The plan will encompass Canada's space efforts in the area of remote sensing, communications, space science and industry development. The new five-year plan will ensure the most effective use of the government's resources in the space effort.

When the Prime Minister announced the transfer of responsibility for space policy and development, it was also announced that the Privy Council Office and the Ministry would study how space activities should be better coordinated and the Ministry's new space responsibilities strengthened. This study is in progress and recommendations are expected by the end of 1980.

In making the announcement, the Minister noted that the importance placed on space research and development can be recognized in the fact that almost \$54 million has been designated for increased expenditures for new space projects over the next five years. These projects are: The Space Science Program with NASA; Preparatory Remote Sensing Program with the European Space Agency, (ESA); L-SAT Studies with ESA; Extension of ANIK-B communications experiment; radar satellite studies and mobile satellite studies.

For further information call: Françoise Rhéaume
 Ministry of State for
 Science and Technology
 (613) 995-3093

**from the Minister of State
for Science and Technology
the Hon. John Roberts**

For release

April 9, 1981

CAI

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- N22

**SCIENCE MINISTER ANNOUNCES
NEW SPACE PLAN AND FUNDING INCREASE**

OTTAWA---On the eve of the launch of the U.S. Space Shuttle, in which Canada is a major participant, the Minister of State for Science and Technology, the Honourable John Roberts, who is responsible for space, today announced a new space plan for 1981/82 to 1983/84 and the allocation of \$64 million for new space projects starting in 1981/82. This sum is in addition to the \$196 million already allocated for existing space projects for the period. This brings total government funding for the Canadian space program over the three year period to a total of more than a quarter of a billion dollars.

The new space plan has three important thrusts:

- it gives a high priority to technology development in Canadian industry
- it gives emphasis to the potential of remote sensing in resource management and surveillance and thus diversifies Canada's capacity to use space



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- it introduces a comprehensive, coordinated multi-year approach to financing the space program.

Today's announcement of the funding increases was welcomed by the Honourable Francis Fox, Minister of Communications; the Honourable Marc Lalonde, Minister of Energy, Mines and Resources; the Honourable Judy Erola, Minister of State (Mines) and the Honourable Romeo LeBlanc, Minister of Fisheries and Oceans. Funds will be allocated to programs in each of their departments.

The new allocations build on the existing program and will allow Canada to pursue the use of space technology in critical economic and social areas - remote sensing, communications, broadcasting, meteorology and environmental monitoring - and will continue the development of the Canadian space industry.

The various projects to be financed are:

<u>Remote Sensing</u>	<u>\$M</u>
- Landsat ground stations	14.3
- radar satellite R&D	17.0
- participation in European Remote Sensing Program	4.1
- meteorological satellite R&D	3.3
- chlorophyll sensor development	0.5
- technology transfer	0.5
 <u>Technology Development</u>	
- key technology program	6.0
- participation in European Large Communications Satellite Program	3.1
- technology development program	9.9
- semi-conductor facility	1.0

<u>Communications</u>	<u>\$M</u>
- direct broadcast satellite studies	1.5
- additional personnel resources	2.8
- Controls Laboratory expansion	0.4

The increased expenditure on space is part of the government's effort to enhance the R&D capacity of the country, in particular industrial R&D and therefore create jobs in competitive, export-oriented industries.

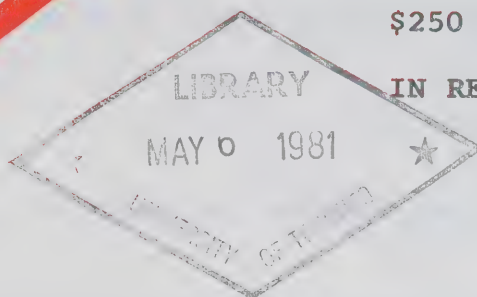
About 80 per cent of the increased funding will be spent in the industrial sector. The companies involved are located in Quebec, Ontario, Manitoba, Saskatchewan and British Columbia. In addition, the Landsat receiving stations in Shoe Cove, Newfoundland and Prince Albert, Saskatchewan will be upgraded.

The Minister also noted that technical and economic feasibility studies are underway for a radar satellite and a mobile communications satellite. These satellites would bring new services and information to Canadians for resource management, surveillance and communications to remote and mobile users.

For further information: Françoise Rhéaume
Communications Services Division
(613) 995-3093

from the Minister of State
for Science and Technology
the Hon. John Roberts

For release

April 29, 1981
1:30 p.m.**\$250 MILLION INCREASE****IN RESEARCH EXPENDITURES**

OTTAWA--The Parliamentary Secretary to the Minister of State for Science and Technology, Roger Simmons, M.P., said today that expenditures on research and development (R&D) by the federal government were expected to increase by at least \$250 million in 1981-82. This follows upon an increase of almost \$200 million in 1980-81. Mr. Simmons was addressing the annual general meeting of the Canadian Advanced Technology Association in Ottawa.

Mr. Simmons, speaking on behalf of the Honourable John Roberts, the Minister of State for Science and Technology, noted that a large part of the increase would flow directly to industry in support of industrial R&D and other parts of the innovative process. Among the programmes of special interest to industry were:

- the Defence Industry Productivity Programme which, over the two years, will have increased by about \$70 million to \$150 million of which approximately 70% is for R&D;

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- the Enterprise Development Programme, by about \$35 million to \$75 million, of which 90% is for R&D;
- the National Research Council's Industrial Research Assistance and Pilot Industry-Laboratory Programmes by \$17 million to \$46 million.

Other programme increases involving funding to industry include space, Telidon and energy.

Mr. Simmons said that the federal government is also stimulating increased R&D through generous tax incentives. These tax incentives were expected to cost approximately \$100 million this year. This cost would increase rapidly if industry were to move strongly towards meeting the R&D target set by the government. The government also helps industrial R&D through its contracting-out policy under which it places about \$100 million worth of business with industry.

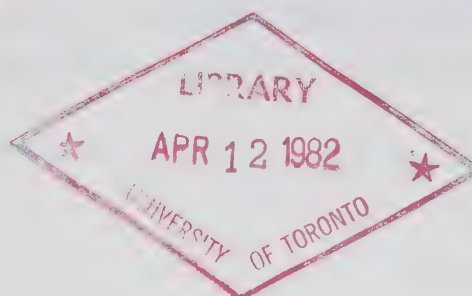
Mr. Simmons added that other increases in R&D expenditures were allocated to departmental programmes and to the support of university research. He noted that the government had not yet made any final decision on the level of the budget for the Natural Sciences and Engineering Research Council and the Social Sciences and Humanities Research Council.

For further information, contact:

Françoise Rhéaume
Ministry of State for Science and Technology
(613) 995-3093

Bulletin

March 30, 1982

THE GOVERNMENT OF CANADA'S INVESTMENT
IN SCIENCE

OTTAWA---The Honourable John Roberts, Minister of State for Science and Technology today released the booklet "The Government of Canada's Investment in Science". The booklet gives an overview of the 1982/83 federal science expenditures proposed in the Main Estimates which were tabled in the House of Commons February 23.

Highlights of the projected increases in federal science expenditures for 1982/83 are:

- . Total federal science expenditures will reach \$2.94 billion in 1982/83, an increase of about 13% over the \$2.6 billion budgeted for 1981/82.
- . In the natural sciences, total federal R&D expenditures are budgeted at \$1784 million, with \$390 million going to support R&D performed in industry and \$350 million to support R&D performed in universities.
- . In the human sciences total science expenditures are estimated at \$578.9 million in 1982/83.

The booklet also highlights Canada's progress towards the R&D target of 1.5% of GNP announced in 1981.

- . The combined investment by government, industry and universities in R&D (natural sciences) has increased by 34% since the target and the R&D Planning Framework were established...from \$2.63 billion in 1979 to \$3.52 billion in 1981.

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- . Investment by industry in R&D (natural sciences) has risen by 43% since 1979.
- . Investment by the federal government in research and development increased by 34% during the same period.

For further information or copies of the booklet, please contact:

Françoise Rhéaume

Joanna Warwick

Communications Services Division

(613) 995-3093



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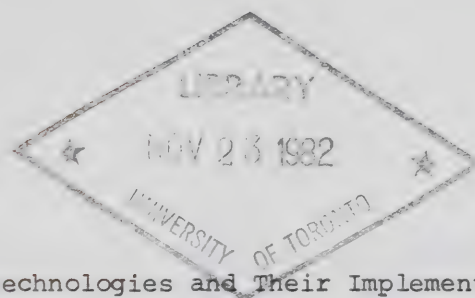
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TASK FORCE REPORT ON ENERGY CONSERVATION
TECHNOLOGIES AND THEIR IMPLEMENTATION RELEASED TODAY



OTTAWA---The Task Force Report on Energy Conservation Technologies and Their Implementation was released today by the Minister of State for Science and Technology and Economic Development, the Honourable Donald J. Johnston.

Among its 22 recommendations, the Task Force suggests the federal government identify and implement strategies and support mechanisms to ensure a broader use of existing technologies. To encourage this, the group suggests the government offer financial incentives, support marketing programs, establish data bases and provide training to create skilled personnel.

The Task Force stressed that any government financial incentives should be paid out of the savings realized in decreased compensation payments resulting from reduced oil imports.

The 14-member panel which included members from industry, universities and government concluded that not only is energy conservation as important to Canada's energy needs as increasing new supplies, but also it is a considerably cheaper alternative that holds many opportunities for Canadian industry.

The report, which reinforces the federal commitment to conservation as a clean, enduring and often the least expensive way to improve the nation's overall energy balance, will now be the subject of comment by the federal departments and agencies affected by the recommendations.

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For more information or a copy of the report, please contact:

Joanna Warwick
Communications Services (613) 995-3093

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For release
Pour diffusion November 15, 1982



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ADVISORY COMMITTEE ON
INTERNATIONAL COLLABORATION
IN MICRO-INFORMATICS
IS ESTABLISHED

OTTAWA---The Minister of State for Science and Technology and for Economic Development, the Honourable Donald J. Johnston today announced that an Advisory Committee on International Collaboration in Micro-informatics would be established to advise the government on Canada's involvement in the World Centre - Informatics and Human Resources in Paris. The Committee will include representatives from business, labour, universities, and research institutes.

Canada's plans for participation in the World Centre were announced by the Prime Minister in Paris on November 10. In a letter to M. Servan-Schreiber, President of the World Centre, Mr. Trudeau commented on the importance of micro-informatics to society and said that Canada is considering several means for Canadian participation. The Advisory Committee will be examining the feasibility of sending Canadian scientists to Paris for a year to work at the Centre. They will consider the possibilities of undertaking a project in Canada, in collaboration with the Centre, or donating Canadian-built equipment to the Centre. The Prime Minister also suggested, for consideration, the naming of Canadian representatives to the Administrative Council of the World Centre.

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November 22, 1982

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Established in 1981 by President Mitterrand of France, the World Centre in Paris will study the applications and implications of micro-computers for information technologies. A crossroads for ideas and knowledge in the world of micro-informatics, the Centre will monitor the impact of the new technologies on society and will develop technologies accessible to a wide range of personal and national incomes.

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For further information, please contact:

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PRESS RELEASE

Government
Publications

from the Minister of State
for Science and Technology
the Hon. John Roberts

For release August 7, 1981
10:00 a.m.



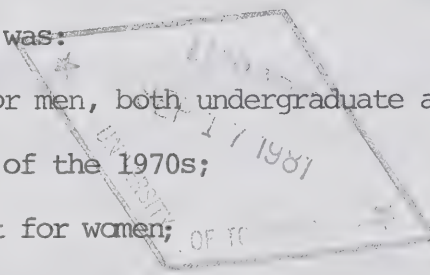
SCIENCE MINISTER RELEASES TWO BACKGROUND PAPERS ON HIGHLY QUALIFIED MANPOWER

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OTTAWA --- The Honourable John Roberts, Minister of State for Science and Technology and Minister of the Environment, today announced the release of two background papers dealing with the supply of Highly Qualified Manpower (HQM) in Canada. One of the studies deals specifically with recent trends in degrees awarded and enrolments at Canadian universities, and the other with university enrolment projections to the year 2000.

According to the studies, the university population has undergone a number of significant changes over the 1970s. There was:

- a decline in full-time enrolment for men, both undergraduate and post-graduate over the latter half of the 1970s;
- an expansion in full-time enrolment for women;
- continued expansion of part-time undergraduate and graduate enrolment;
- a continued increase in the number of foreign (visa) students;
- only minor growth in the number of enrolments and degrees awarded at the graduate level in both the fundamental and applied sciences fields; and



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- a decline in the full-time enrolments at the PhD level by one-fifth in natural sciences. The decline was particularly evident for the fields of engineering and applied sciences in which PhD enrolments fell by about one-third.

These and other factors are reviewed in background paper No. 14: "Recent Trends in Degrees Awarded and Enrolments at Canadian Universities".

Looking ahead to the year 2000, two major factors will alter the size and composition of the university population. The first is the decline in the 18-24 age group, reflecting the fall in birth rates that began in the early sixties, and the second is the increasing number of adults attending university. Background paper No. 15: "Enrolment Projections to the Year 2000", finds that:

- full-time university enrolment is expected to peak in 1982-83 and then fall steadily to the mid 1990s;
- the decline in the 18-24 year-old population from the early 1980s to the mid 1990s will be a major factor reducing full-time undergraduate enrolments;
- there will be an increase in the number of adults who attend university on a part-time basis, or as graduate students. The increase in their number will partially offset the declines in the number of younger students; and
- the proportion of women enrolled at university is expected to reach some 50 percent of the total student population.

For further information, please contact:

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(613) 995-3093

from the Minister of State
for Science and Technology
the Hon. John Roberts

For release

August 26, 1981

FOR IMMEDIATE RELEASE



SCIENCE MINISTER RELEASES TWO BACKGROUND
PAPERS ON RESEARCH TRAINED MANPOWER

CAI
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-NXL

OTTAWA -- The Honourable John Roberts, Minister of State for Science and Technology and Minister of the Environment, today announced the release of two background papers dealing with the stock of research trained personnel and research manpower requirements arising from accelerated expenditures on research and development. These complement background papers Nos. 14 and 15 which focussed on the recent trends in degrees awarded and enrolments at Canadian universities, and on university enrolment projections to 2000.

Background Paper No. 16, "The Stock of Research Trained Manpower" reviews Canada's national research manpower capacity in the natural sciences. In particular, the study indicates:

- about 45% of our R&D manpower is employed in the industrial sector. This proportion is relatively low compared to most other industrialized countries;
- the federal government employs about one-third and the universities nearly one-quarter of the R&D manpower;
- in the university sector, about one-quarter of Canada's R&D personnel are located in Quebec, 40 percent in Ontario and nearly one-third in the West;
- in the industrial sector, the proportion of researchers with qualifications



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at the graduate level increased from 29 percent in 1971 to 37 percent in 1977; and

- firms most likely to employ graduate level scientists and engineers are related to the electrical and chemical based industries.

Background paper No. 17, "Research Manpower Requirements Arising from Accelerated Expenditures on R&D" addresses the problem of Canada's future requirements for R&D manpower. This study finds that:

- the additional R&D work associated with the government's R&D target will require a significant increase in the national pool of researchers;
- a major challenge in the achievement of the Canadian R&D effort will be to increase the number of R&D personnel employed in industry;
- some future imbalances may be offset by the strategic use of immigration to transfer knowledge and skills to Canadians;
- the number of graduates available for the Canadian labour market has declined and this trend must be reversed to achieve high levels of R&D effort; and
- the existing capacity of the universities to produce graduates in the applied sciences is limited. The achievement of higher levels of R&D will depend on the ability of the universities to meet this challenge.

For further information, please contact:

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(613) 995-3093



Minister of State

Science and Technology
Canada

The Hon. John Roberts

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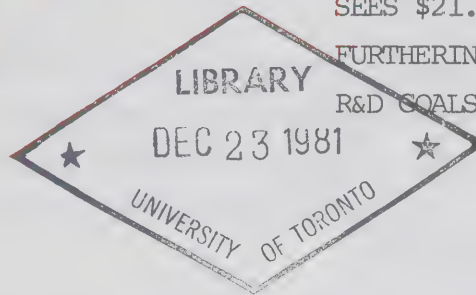
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L'hon. John Roberts

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SCIENCE MINISTER ROBERTS
SEES \$21.7 MILLION NSERC GRANTS
FURTHERING NATIONAL ECONOMIC AND
R&D GOALS



OTTAWA---The Honourable John Roberts, Minister of State for Science and Technology today welcomed the announcement by the Natural Sciences and Engineering Research Council (NSERC) of awards totalling \$21.7 million for the 1981-82 Strategic Grants Program. He highlighted the role that these funds will play in helping to provide the necessary research and skilled manpower for Canada in the coming decade.

The strategic grants support the overall research and development (R&D) objectives outlined in the planning framework announced by the Minister earlier in the year. Mr. Roberts noted that the Economic Development Policy released with the budget underscored the governments commitment to research and development, and to the 1.5% R&D spending target of GNP by 1985. Research and development are key to the realization of national industrial and economic objectives.

This funding will help advance research in several high-potential sectors critical to Canada's scientific and economic future. Research in the communications, energy, environmental toxicology, food and agriculture, and oceans sectors will be supported by the new funds. In communications, for example, grants will help develop a prototype message management system for personal computers which may be applied to office information systems and home video text systems. Micro emulsion research, in the energy field, will be key to oil extraction, tar sand separation and oil spill dispersion and will thus contribute to the energy research objectives of the National Energy Plan and to environmental objectives. In addition, the grants will fund research into the toxicity of vanadium and nickel and by-products of oil refining.

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Canada

For release
Pour diffusion

December 7, 1981

Canadian university research into food and agriculture will also be supported, and new approaches for increasing the photosynthetic productivity of wheat and the winterhardiness of key winter cereal crops (winter wheat, tricale and rye) will be developed. Research into wheat disease and crop management practices will aim at increasing crop yields. Finally, additional oceanic research will look at biological production as a means of increasing stocks of young fish.

The 204 new grants totalling \$10.4 million and the 240 installments of on-going grants totalling \$11.3 million will also make possible projects deemed to be of national concern by Canadian universities. These funds will help Canadian universities fulfill their share of the five year R&D goals and contribute to developing natural resources and enhancing human resources for Canada.

For further information, please contact:

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Minister of State

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The Hon. John Roberts

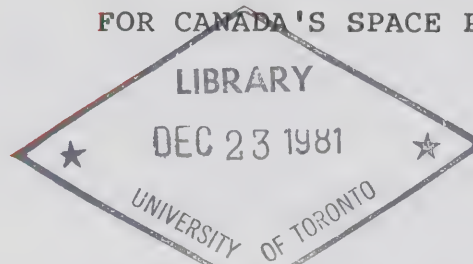
L'hon. John Roberts

Release Communiqué

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ROBERTS ANNOUNCES MAJOR BOOST
FOR CANADA'S SPACE PROGRAM

CAI
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-1126



MONTREAL -- The Honourable John Roberts, Minister of State for Science and Technology, and Minister Responsible for Space Policy, today announced a major boost for Canada's space program.

Mr. Roberts said the government has agreed to provide, over the next four years, an additional \$132.1 million for space activities. This will bring to \$475.8 million the government's commitment to space for the period 1981-82 to 1984-85. The funds will be used to strengthen and expand Canada's capabilities in communications, remote sensing and technological development, and to further strengthen our participation in major European space projects.

"This 38 percent increase in funding is a firm indication that the government is giving high priority to the space program. This commitment will advance our technological capability to meet Canadian and world needs in this key sector. It is also a reflection of the importance of high technology to Canada's economic development in the 80's", said Mr. Roberts. This announcement today is one in a series of steps being taken by the government to advance the new economic development strategy which was outlined with the Budget.

The budget paper on Economic Development in the 1980's singled out industrial investment and innovation as one of five priority areas. Earlier this year, the Government put forward a Planning Framework to raise R&D expenditures to 1.5% of G.N.P. This new commitment to space and space industries is further evidence of the government's support for high risk innovative activity and innovation-based growth.

The new funds will permit the continued development of an industrial prime contractor, SPAR Aerospace Limited, to produce satellites and satellite subsystems for the growing domestic and world market.

Last spring the government approved a three-year plan to pursue the use of space technology. "Today's announcement goes a step further", said the Minister.

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For release
Pour diffusion

December 9, 1981

The new initiatives made possible by the increased funding include:

- Canada's participation in the Large Satellite Program (LSAT, Europe's new communications satellite) of the European Space Agency. Through this program Canada will become a major partner with important European high technology companies in the U.K., Italy and the Netherlands.
- The engineering studies required to define a mobile satellite communications project (MSAT) to demonstrate new communications services for ships, aircraft, ground vehicles and portable installations.
- The development of new remote sensing programs critical to resource management and territorial and environmental surveillance.

The Minister pointed to the positive impact that these new projects and those already underway will have on Canada's space industry. In addition to the expected social and economic value of these programs, they will build up the advanced technological base in the country and bring us closer to the national R&D targets announced by the Minister in January. It is anticipated that over one thousand new jobs will be created in different regions of the country over the next four years as a result of this decision and the expected growth in the worldwide demand for satellites and ground systems.

A summary of the federal government's financial commitment to the space program to 1984-85 is as follows:

(in millions of dollars)

Program Area	Allocation of New Funds	Current Funds	TOTAL
Communications	17.5	86.1	103.6
Remote Sensing	15.7	120.0	135.7
Technology Development	93.1	63.0	156.1
Space Science	-	72.9	72.9
Participation in ESA	5.8	1.7	7.5
TOTAL	132.1	343.7	475.8

For further information, please contact:

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(613) 995-3093



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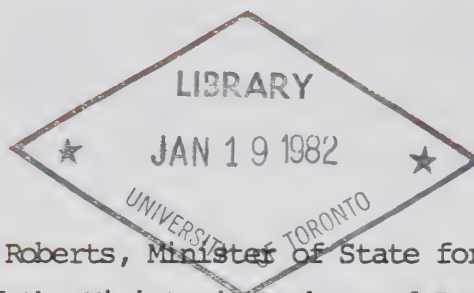
The Hon. John Roberts

L'hon. John Roberts

Government
Publications

Release Communiqué

SCIENCE MINISTER RELEASES
BACKGROUND PAPER ON
ENGINEERING MANPOWER



OTTAWA— The Honourable John Roberts, Minister of State for Science and Technology today announced the release of the Ministry's Background Paper No. 18, "Requirements for Engineering Graduates to 1985".

This report is the latest in a series of Background Papers on Highly Qualified Manpower. It reviews the trends in enrolments, degrees awarded and requirements for engineers over the 1970s and considers the future requirements and supply to the mid 1980s. In particular, the study finds that:

- During the 1970s, engineers had little difficulty in finding employment, and employers were eager to hire engineering graduates, not only in engineering but also in a wide range of other occupations;
- Some 6,400 graduates in engineering were required each year over the 1970s with about 60 percent for engineering jobs and about 40 percent for jobs in other occupations;
- Taking into account economic development and planned projects, the projections indicate that requirements will exceed the supply of engineering graduates from Canadian universities in the 1980s, unless further measures are taken;

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Canada

For release
Pour diffusion December 22, 1981

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- In particular, certain engineering specialties are expected to be in high demand over the 1980s. These include: chemical process, mechanical sales, plant instrumentation, structural, aeronautics, electronics and mining engineering. A strong demand is also anticipated for engineering faculty and research personnel.
- A large shortfall is anticipated at the graduate level as Canadian universities are expected to supply only about 60 percent of the graduates required to 1985.

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For further information, please write to:

Communications Services Division
Ministry of State for Science and Technology
270 Albert street
Ottawa, Ontario
K1A 1A1

from the Minister of State
for Science and Technology
the Hon. John Roberts

For release

10 June 1981
1:30 p.m.



MINISTER SAYS SECTORAL STRATEGY

VITAL TO CANADA'S FUTURE

TORONTO --- A long-range sectoral strategy, concentrating on those high-potential technologies in which Canada has a comparative advantage, will be critical to Canada's future in the 1980s and 1990s. The cultivation of emerging technologies, such as biotechnology and microelectronics, along with established technologies such as space and communications is essential to this strategy, said John Roberts today in a speech to the Canada-Israel Chamber of Commerce.

The Minister told the Chamber that a sectoral strategy should comprise five elements, all of which relate to, and promise to enhance, regional and national economic development.

- " 1) The sectoral strategy recognizes that our economy is largely resource-based and that we must use science and technology as the means of maintaining our competitive edge in the development of these resources. Agricultural output, for example, critical to the West, can continue to be increased through improved grain yields brought about by new developments in biotechnology.
- 2) The sectoral strategy would expand our resource orientation by applying the common sense principle of processing some of our resources where that would be most efficient -- the resource base. Development of new energy technologies will help the Alberta petrochemical industry produce fertilizer, butane derivatives, ethylene and methanol more effectively.



Minister of State

Ministre d'État

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- 3) A sectoral strategy would foster very new emerging technologies in which Canada clearly has a unique capability. Biotechnology will be to us in the next decade what microelectronics is to us now.
- 4) A sectoral strategy would help to capitalize on the spinoffs from the megaprojects Canada will be undertaking in the next decade. Tar sands developments, for instance, will require new breakthroughs in machinery and tooling equipment technology. Skillfully applied, this technology could yield fantastic advantages in other high potential industries.
- 5) The sectoral strategy would continue to support high-technology industry with proven markets and solidly-demonstrated potential. The space industry, so productive for Ontario, is one area in which Canada has emerging world-class technology. "

The need for a long-term sectoral strategy complements the R&D planning framework announced for the mid-term by Mr. Roberts in January. The Minister indicated that substantial progress was being made by both government and industry towards the attainment of the 1985 target of 1.5% of G.N.P., central to the planning framework.

Mr. Roberts also remarked on the uniqueness of Canada-Israel relations for the science effort in both countries and pointed to the importance of this for international R&D collaboration.

For further information, please contact:

Peter Serafini
Minister's Office
(613) 997-1441

Françoise Rhéaume
Communications Services
(613) 995-3093



News Release

CAI
S
-N 26
For release

February 7, 1985

MINISTERS AGREE ON SCIENCE AND TECHNOLOGY STRATEGY

OTTAWA--The Honourable Tom Siddon, Minister of State for Science and Technology, in commenting on the meeting of Federal, Provincial and Territorial Ministers responsible for Science and Technology which was held in Calgary on February 4 and 5, 1985, noted that he was extremely pleased with the degree of consensus achieved at the meeting.

"I was pleasantly surprised at the interest and cooperation demonstrated by all participants," he said. "It is clear that this forum has been greatly missed since the last meeting of Ministers in 1978".

At the meeting, Ministers jointly agreed that Canada must increase its commitment to promoting science, technology and innovation as key instruments of economic renewal, and urged that science and technology be considered as priority areas for investment and

funding. Giving reference to the available economic evidence, Ministers noted their conviction that investments in technology development pay significant benefits in economic growth and job creation.

As a highlight to the meeting, Ministers also agreed to develop a comprehensive NATIONAL POLICY ON SCIENCE AND TECHNOLOGY designed to build upon provincial and territorial economic opportunities and priorities. The national policy would lead to a number of specific initiatives to most effectively employ finite monetary and human resources.

A copy of the joint communique issued by Ministers at the Conference is attached.

For further information, please contact:

Kathleen Campbell
Director
Communications Branch
(613) 996-0326

FEDERAL-PROVINCIAL-TERRITORIAL CONFERENCE OF
MINISTERS OF SCIENCE AND TECHNOLOGY

JOINT COMMUNIQUÉ

Calgary, Alberta
February 5, 1985

For the first time since 1978, Ministers responsible for Science and Technology at the federal, provincial and territorial level met to discuss matters of mutual concern. The meeting was conducted under the chairmanship of the Honourable Tom Siddon, federal Minister of State for Science and Technology, on February 4 and 5, 1985, in Calgary.

Ministers highlighted the important role that science, technology and innovation must play in economic renewal, and recommended the First Ministers endorse science and technology as a priority area for investment and funding, identifying it as a source of economic growth and job creation. Ministers were presented with evidence of Canada's poor performance in exploiting the economic potential of science and technology in comparison to our major international competitors.

Ministers committed themselves to producing a comprehensive NATIONAL POLICY ON SCIENCE AND TECHNOLOGY, designed to build upon provincial and territorial economic opportunities and priorities. In pursuing this goal, Ministers emphasized the necessity for business and industry to play an increased role in support of this policy.

Ministers also agreed to more effective and continuing cooperation in both planning and implementing science and technology strategies, and pledged to meet again within a year to review progress on the National Policy.

Further agreement was reached on three fundamental priorities designed to:

- I. Stimulate private sector investment in innovation.
- II. Encourage the transfer and application of technology.
- III. Support important basic research to develop longer term scientific expertise and industrial leadership for the country.

Ministers adopted an agenda for cooperative action, and identified specific proposals which the federal, provincial and territorial governments would jointly examine in the context of work on the National Policy. These included pledges to:

1. Work for more effective programs of grants, tax incentives and procurement targetted especially to small- and medium-sized technology-intensive ventures.

2. Review and evaluate all existing agreements and programs to support provincial and territorial industrial development, with a view to increasing their effectiveness in promoting new technology, leading to more productive and internationally competitive industries.
3. Review the possibilities for more efficient coordination and use of all governmental research laboratories, in order to ensure better coupling with industrial opportunities and priorities and thus new job potential.
4. Seek ways and means of improving access to federal and provincial programs of support for industrial R&D, and access to information. Ministers will, in particular, investigate the possibility of creating single-desk access to such assistance on a decentralized basis.

Provincial Ministers urged the federal government to continue to improve the federal 5-year plans in support of postgraduate research programs within Canadian universities. The provincial ministers said adequate and predictable funding was essential if the human resource requirements of a more technology intensive economy are to be met. They also called for reinstatement of some form of the Scientific Research Tax Credit (SRTC) which would be understandable and effective in enhancing research, innovation and new product development.

Finally, the Ministers agreed that the conclusions of their deliberations would be forwarded to their respective First Ministers, for consideration at their forthcoming Meeting in Regina, on February 14 and 15, 1985.



Canada

News Release



CAI
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For release - N/26 May 28, 1986

Leaders of Canadian industry and business, labour and academia
to meet on science and technology policy



Ottawa -- In a major step to develop a comprehensive science and technology policy for Canada, Science and Technology Minister Frank Oberle is hosting a national public policy forum bringing together some 200 leaders from Canadian industry, business, labour, academia and professional associations. The media is invited to attend all sessions and events.

"The national forum in Winnipeg is a unique and challenging opportunity to bring a wide range of Canadian views into our science and technology policy-making process", said Mr. Oberle. "I want to put Canadian science and technology and Canadian research and development back on track. That's why I have asked Dr. Stuart Smith, Chairman of the Science Council of Canada, to conduct a national forum with major Canadian opinion leaders to discuss the science and technology issues most crucial for Canada's future development. I have also invited my provincial counterparts to join me at the forum."

Scheduled for June 8-10, 1986 at the Fort Garry Hotel in Winnipeg, the National Science and Technology Policy Forum will be an important milestone in a policy development process that began with a meeting of federal/provincial science and technology Ministers in February 1985 and followed by an informal meeting in September. Since assuming his portfolio, Mr. Oberle has conducted a number of intensive consultations across Canada with a wide range of representatives from the S&T community and with provincial government Ministers.

"I am hopeful that this process will culminate in 1987 with a national policy and action plan to improve Canada's productivity and international competitiveness," said Mr. Oberle. "The Winnipeg forum will help meet this objective and the forum participants should be commended in advance for their dedication".

During the first day, participants in workshops will focus on themes such as acquiring and developing new knowledge, exploiting technological opportunities and adapting to technological change. On the second day, at the plenary session, Dr. Stuart Smith will sum up the reports from workshop rapporteurs. This will be followed by reactions from business, labour and academic representatives and then general discussions.

Recommendations from the Winnipeg Forum will be a major part of the foundation for future federal-provincial discussions.

(See attached list of selected participants.)

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For Further information:

Eugene Nyberg
Secretary of Council and
Director of Communications
Science Council of Canada
(613) 996-2822

or

John MacMillan
Special Assistant for
Communications
Minister's Office
Ministry of State for
Science and Technology
(613) 993-1368

National Forum on Science and Technology
List of Selected Participants

Mr. Roy Woodbridge	President, Canadian Advanced Technology Association
Dr. A.T. Stewart	President, Royal Society of Canada, Department of Physics, Queen's University
Dr. M.P. Bachynski	President, Canadian Research Management Association
Dr. Howard Rapson	President, Chemical Institute of Canada
Dr. J. William McGowan	President, Association for the Advancement of Science in Canada
Mr. Sandy Stewart	President, Canadian Science Writers' Association
Mr. Eric Geddes	Chairman, Alberta Heritage Foundation for Medical Research
Dr. Norman Wagner	President, University of Calgary
Dr. Arnold Naimark	President, University of Manitoba
Mr. Ralph Bullock	Vice President, Engineering, Bristol Aerospace
M. Maurice L'Abbé	Président, Conseil de la science et de la technologie du Québec
Mr. Robert D. Neill	Chief Executive Officer and Chairman of the Board Neill and Gunter Ltd.
Mr. John M. Currie	President, Internav Ltd.
Dr. Regis Duffy	President, Diagnostic Chemical Ltd.
Mr. Frank D. Smith	President and Chief Executive Officer, Newfoundland Ocean Resources and Development Corporation
Dr. Arthur May	President, Natural Sciences and Engineering Research Council
Dr. Fraser Mustard	President, Canadian Institute for Advanced Research
Dr. John J. Shepherd	Chairman, Leigh Instruments Ltd.
Dr. Louis Siminovich	Professor and Chairman, Department of Medical Genetics, University of Toronto
M. Roger Blais	Directeur, Services de R-D coopératifs, Ecole Polytechnique de Montréal
Dr. G.A. Kenney-Wallace	Professor of Chemistry and Physics, Lash Miller Laboratories, University of Toronto
Mr. A.H. Zimmerman	President and Chief Operating Officer, Noranda Mines Ltd.
Mr. Val Bourgeois	General Vice-President, International Association of Machinists and Aerospace Workers
Susan Attenborough	Canadian Labour Congress



News Release



For release

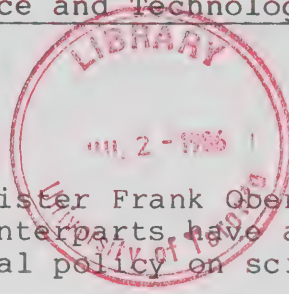
June 13, 1986

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National Policy on Science and Technology



OTTAWA -- Science and Technology Minister Frank Oberle announced today that he and his provincial counterparts have agreed to a continuing process to build a national policy on science and technology.

"We are now beyond the discussion stage", said Mr. Oberle after meeting informally with provincial Ministers throughout the two-day National Forum on Science and Technology Policy held in Winnipeg earlier this week. "I hope that we can now forge this Forum's conclusions into a truly national consensus", the Minister added.

Minister Oberle said that he and his fellow science and technology Ministers have agreed that before presenting proposals for a national science and technology policy to their respective governments, they will meet later this year to work out specific details. Federal officials have been instructed to begin meetings with provincial representatives to arrange for a federal/provincial Ministers' conference.

The National Forum on Science and Technology Policy was chaired by Dr. Stuart Smith, Chairman of the Science Council of Canada. Discussion centered on the themes of "Developing and Acquiring New Knowledge", "Putting Knowledge to Work and Realizing Opportunities", and "Involving All Canadians and Adapting to Change".

The Forum, which brought together over 200 leaders from Canadian industry, labour, academic and professional associations, was the latest step in a policy development process which began with meetings of federal and provincial science and technology Ministers in February and September of 1985. Minister Oberle has also conducted extensive consultations across Canada.

It's our year!

in motion...in touch



C'est notre année!

en mouvement...au courant

"I was struck by the sense of urgency demonstrated by all participants at the Forum. I feel that the positive atmosphere bodes well for the future of science and technology in this country," said Mr. Oberle.

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For further information, please contact:

John MacMillan
Special Assistant for Communications
Minister of State for Science and Technology
(613) 993-1368



Minister of State

Ministre d'État

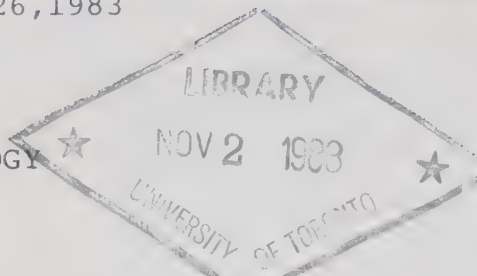
Economic Development
Science and Technology

Développement économique
Sciences et Technologie

Release

For release

October 26, 1983



CAI
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NATIONAL BIOTECHNOLOGY
ADVISORY COMMITTEE
ESTABLISHED

MONTREAL---The Honourable Donald J. Johnston, Minister of State for Science and Technology and for Economic Development today announced the creation of the National Advisory Committee on Biotechnology. This Committee is an integral part of the Biotechnology Strategy for Canada announced last May by Mr. Johnston in the House of Commons as an element of the Technology Policy.

Twenty-five members, from the private sector, universities and government, have been appointed by the Minister to serve on this Committee. They will advise the Minister directly on the development of biotechnology in areas such as energy, food, drugs, chemicals, plastics, mining and agriculture.

In a speech to the members of the Committee on the occasion of its first meeting in Montreal, the Minister said, "This Committee will provide guidelines and ensure that the opinions of industry and the universities are a major factor in the federal government's programs in the field of biotechnology -- a field of increasing importance to economic development."

The federal government has allocated \$22 million to implement the National Biotechnology Strategy so that Canada benefits from new developments in this area. This Strategy supports research networks, involving industry, universities and government, which concentrate on using biotechnology to enhance industrial development and the use of Canada's resource base.

A list of Committee members is attached.

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For more information, please contact:

Dr. D.B. Shindler
(613) 593-4281

Canada

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working travaillons
together ensemble
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NATIONAL BIOTECHNOLOGY ADVISORY COMMITTEE

MEMBERS

Dr. J.R. Evans (Chairman)	Chairman and Chief Executive Officer, Allelix, Ltd., Mississauga, Ontario.
Dr. A. Beaulnes,	Director, Institut Armand-Frappier, Québec, P.Q.
Dr. R.G.S. Bidwell	I.W. Killham Research Professor, Dalhousie University, Halifax, N.S.
Dr. W.A. Cochrane	Chairman and Chief Executive Officer, Connaught Laboratories, Ltd., Willowdale, Ontario.
Mr. J.V. Cross	President, Philom Bios, Saskatoon, Sask.
Dr. R. Dionne-Marsolais	President, BioEndo Inc., Montréal, P.Q.
Dr. J.R. Duffy	President, Diagnostic Chemicals Ltd., Charlottetown, P.E. I.
Dr. J.A. Fortin	Professor of Forestry, Laval University, Québec, P.Q.
Dr. J.D. Friesen	Chairman, Department of Medical Genetics, University of Toronto, Toronto, Ont.
Dr. B.A. Holmlund	Vice President, Special Projects, University of Saskatchewan, Saskatoon, Sask.
Dr. L. Jurasek	Head, Biological Chemistry Section, Pulp and Paper Research Institute, Pointe Claire, P.Q.
Dr. J.G. Kaplan	Vice President, Research, University of Alberta, Edmonton, Alta.
Dr. D.G. Kilburn	Professor of Microbiology, University of British Columbia, Vancouver, B.C.
Mme. M.S. Lamontagne	Layperson and social scientist, Québec, P.Q.
Dr. G.R. Lawford	Technical Director, George Weston Ltd., Toronto, Ont.
Dr. D. Layne	Vice President, Research, Toronto General Hospital, Toronto, Ont.
Dr. V.A. Mode	Executive Director, B.C. Research, Vancouver, B.C.
Dr. H.R.S. Ryan	Professor of Law, Queen's University, Kingston, Ont.
Mr. D.J. Saxby	President, Pacific Isotopes and Pharmaceuticals Ltd., Vancouver, B.C.
Dr. M. Brossard	Vice President, Biotechnology, National Research Council of Canada

Dr. E.J. LeRoux	Assistant Deputy Minister, Research, Agriculture Canada
Mr. R.H. McGee	Assistant Deputy Minister, Consumer Goods, Services and Resource Processing, Department of Regional Industrial Expansion
Dr. L.A. Slotin	Director, Policy, Planning and Program Development, Medical Research Council of Canada
Dr. M.K. Whitham	Assistant Deputy Minister, Research and Technology, Energy, Mines and Resources Canada
Dr. D.B. Shindler (Secretary)	Project Director, Biotechnology, Ministry of State for Science and Technology.



Minister of State

Ministre d'État

Economic Development
Science and Technology

Développement économique
Sciences et Technologie

Release

For release November 2, 1983

Government
Publications

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-N26

TASK FORCE TO REVIEW FEDERAL TECHNOLOGY DEVELOPMENT PROGRAMS ESTABLISHED

OTTAWA-- The Honourable Donald J. Johnston, Minister of State for Science and Technology and for Economic Development today announced details of a Task Force established to review and recommend improvements to federal policies and programs related to technology development.

The Task Force, which will report directly to the Minister, will review the government's intramural science and technology activities and will make recommendations on whether government research is relevant to industry's needs. It will also study the government's industry support programs, policies currently in place to enhance R&D in the business sector, and how to improve university/industry cooperation.

Dr. Douglas Wright, President of the University of Waterloo has been appointed Chairman. Members from the business sector include Mr. Frank Tyaack, Chief Executive Officer of Westinghouse Canada Ltd., Ontario; M. Guy Saint-Pierre, Chief Executive Officer of Ogilvie Mills and Vice-President of John Labatt, P.Q.; and, Dr. John MacDonald, Chairman of MacDonald Dettwiler & Associates, B.C.

Professor Angus Bruneau, retired Vice-President of Professional Schools and Community Resources at Memorial University, Nfld. will represent the university sector and Mr. Fred Pomeroy, President of the Communication Workers of Canada will represent labour. The Task Force has been asked to report within six months.

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For more information, please contact
Mr. Howard Sprigings
(613) 593-4281



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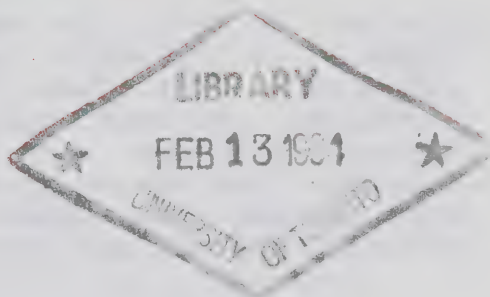
Economic and Regional Development
Science and Technology

Développement économique et régional
Sciences et Technologie

news release

For release February 6, 1984

APPOINTMENTS TO THE NATURAL SCIENCES AND ENGINEERING RESEARCH COUNCIL



OTTAWA-- The Honourable Donald J. Johnston, Minister of State for Science and Technology and for Economic and Regional Development, today announced the appointment of Mr. Alex Curran of Saskatoon, Saskatchewan and the re-appointment of Dr. Ted Schaefer of Winnipeg, Manitoba and Dr. Peter Adams of Edmonton, Alberta to the Natural Sciences and Engineering Research Council (NSERC).

Mr. Curran, who is president of SED Systems of Saskatoon, is past-president of Bell Northern Research in Palo Alto, California and past-assistant deputy minister of the Department of Communications. In addition to being actively involved in several professional associations, Mr. Curran is a member of the Institute of Electrical and Electronics Engineering and the Canadian Manufacturers Association.

Dr. Schaefer, a professor of chemistry at the University of Manitoba, is a graduate of the University of Manitoba and Oxford University, England. He is well-known for his research in high resolution nuclear magnetic resonance. Dr. Schaefer was first appointed to the Council in 1980 and is a fellow of the Royal Society of Canada and the Chemical Institute of Canada.

Dr. Adams, who is Dean of Engineering at the University of Alberta, graduated in civil engineering from the Nova Scotia Technical College and Lehigh University, Pa., U.S.A. He has been a member of NSERC since 1981 and is an active member of several civil engineering associations.

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Canada

Founded in 1978, the Natural Sciences and Engineering Research Council is Canada's largest single funder of university research. The Council's objectives are to assist in the provision and development of highly qualified manpower in the natural sciences and engineering, to support excellence in research for the creation of new knowledge and to promote and support the development of research in selected fields of regional and national importance.

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For more information, please contact:
Marilyn Taylor
Natural Sciences and Engineering Research Council
(613) 993-3659



news release

For release

February 22, 1984

APPOINTMENTS TO THE SCIENCE COUNCIL

OTTAWA—The Honourable Donald J. Johnston, Minister of State for Science and Technology and for Economic and Regional Development today announced the appointment of Dr. Donald Francis Arseneau of Sydney, Nova Scotia, Dr. Robert O. Fournier of Halifax, Nova Scotia and Dr. Fernand Labrie of Quebec City, P.Q. to the Science Council of Canada.

Dr. Arseneau, who is Director of the Bras d'Or Institute, College of Cape Breton, Sydney, N.S., is a graduate in chemistry from St. Francis Xavier University, N.S., Laval University, P.Q. and the University of Saskatchewan, Sask. The author of many professional articles, Dr. Arseneau is a member of the Board of Governors of the Atlantic Coal Institute.

Dr. Fournier, who is Chairman of the Department of Oceanography at Dalhousie University, N.S., is conducting research centered around the plankton dynamics of the Scotian shelf. He is a graduate of the College of William and Mary and the University of Rhode Island, R.I., U.S.A.

Dr. Fernand Labrie, who is Head of the Molecular Endocrinology Research Centre at the University Hospital at Laval University, is a graduate of that university in endocrinology and biochemistry. Dr. Labrie has conducted research in such areas as hormone dependent breast cancer, reproductive physiology and biochemistry, and hormones and the brain.

The Science Council of Canada was established in 1966 to provide both the government and the public with an assessment of science and technology policy in this country. An integral part of its mandate is to improve public awareness of the major issues in science and technology.

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For more information, please contact:

Pierre Bergeron
Science Council of Canada
996-6730 / 996-1729





Minister of State

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Economic and Regional Development
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Sciences et Technologie

news release

For release March 19, 1984

MINISTER ANNOUNCES NEW SPACE PLAN

OTTAWA -- The Honourable Donald J. Johnston, Minister of State for Science and Technology and for Economic and Regional Development and Minister responsible for Space Policy, today announced a new Space Expenditure Plan of \$122.2 million for the years 1984/85 to 1986/87. This 38% increase brings the government's commitment to space over this period to almost \$446 million.

"Canada's space industry has been growing at more than 50% annually with export sales in excess of 70% of total sales. The new Space Plan will assist industry in maintaining this excellent record. Canada is the only nation in which the national space industry sells more than the government spends on space," Mr. Johnston said.

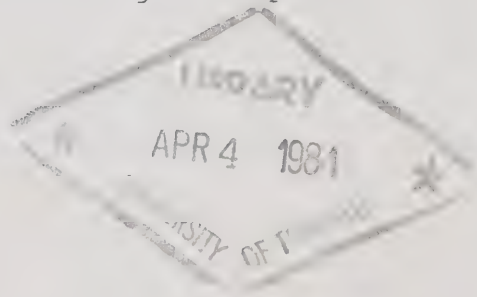
The space industry currently employs over 3200 people. This is an increase of more than 35% over last year. It is anticipated that over 500 jobs for highly skilled people will be created as a result of this initiative.

The new Space Plan follows the Technology Policy announced last May by Mr. Johnston in the House of Commons. The funds will be used to enhance the application of space technology to meet Canadian needs in communications, remote sensing and space science.

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For more information, please contact:

M. Evans
(613) 996-0326 ext. 869.



Canada

FACT SHEET
NEW SPACE PLAN EXPENDITURES
1984/85 to 1986/87

\$ Million

<u>ERS-1 phases C/D:</u> Canadian participation in the construction and use of the European Remote Sensing satellite of the European Space Agency. The satellite will be launched in 1988 and will provide ice, ocean and other data of use to Canada. Canadian industry will provide part of the satellite radar system and the ground-based data processing system.	29.7
<u>RADARSAT phase B:</u> engineering and economic studies for the detailed definition of a remote sensing satellite system capable of providing day or night, all weather, map-like images of the earth. The system would meet unique Canadian needs for off-shore and land resource information.	21.1
<u>Ground System:</u> development of a ground system in Canada to receive, process, and extract information from ERS-1 and RADARSAT.	21.5
<u>Space Science:</u> continuation at about the present level of a cooperative international space science program.	18.9
<u>MSAT Bridging Phase:</u> the proposed MSAT program will provide communications services in the future to mobile users in vehicles, ships and airplanes. Detailed engineering studies are complete. The program is planned as a joint undertaking with the private sector. The current bridging phase will fund protection of Canadian interests for frequency allocation, coverage of far northern areas and industrial participation pending a decision on the implementation phase.	3.9
<u>Space Station Studies:</u> the commissioning of a one year study to define possible Canadian participation in the Space Station program of the U.S.	2.4

Technology Development: expansion of the David 5.5
Florida Laboratory to provide the additional
satellite assembly and environmental test
facilities required by the Canadian aerospace
industry.

Other Items: projects to enhance the usefulness 19.2
of remote sensing data (Landsat D, MOSAICS,
SPOT), communications satellite applications,
development of a sensor to measure the
chlorophyll content in ocean waters (florescence
line imager), environmental monitoring, and the
space counsellor in Europe.

Summary of Space Plan Expenditures to 1986/87

(in millions of dollars)

	<u>1984/85</u>	<u>1985/86</u>	<u>1986/87</u>	<u>Total</u>
space plan				
approved				
in 1981	134.7	105.4	83.4	323.5
new space				
plan	<u>20.3</u>	<u>52.3</u>	<u>49.6</u>	<u>122.2</u>
Total	155.0	157.7	133.0	445.7



691
9/20/84

news release

For release March 26, 1984

APPOINTMENTS TO THE NATURAL SCIENCES AND ENGINEERING RESEARCH COUNCIL

OTTAWA—The Honourable Donald J. Johnston, Minister of State for Science and Technology and for Economic and Regional Development, today announced the re-appointment of Dr. René J.A. Lévesque and Dr. André Biron, both of Montreal, P.Q. to the Natural Sciences and Engineering Research Council (NSERC).

Dr. Lévesque, who is the Acting Executive Vice-rector at the University of Montreal, graduated from Sir George Williams University and obtained a doctorate from Northwestern University (Illinois). Dr. Lévesque has been an active member of several professional scientific associations and is currently president of the Administrative Council of the Canada-France-Hawaii Telescope Society. Dr. Lévesque is a Professor of Physics at the University of Montreal where, until recently, he was Vice-rector of Research.

Dr. André Biron, who is Director of the Department of Mechanical Engineering at École Polytechnique in Montreal, graduated from École Polytechnique and obtained a doctorate from the Illinois Institute of Technology in mechanical engineering and thermodynamics. Dr. Biron's career in the Department of Mechanical Engineering at École Polytechnique began in 1967. He has been in his present position since 1978.

NSERC is a major federal granting agency which supports Canadian research through programs of grants to university professors for research and research infrastructure, scholarships and fellowships for the development of highly qualified manpower, and grants for cooperative R&D activities between universities and Canadian industries.

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For more information, please contact:

Marilyn Taylor

Natural Sciences and Engineering Research Council

(613) 993-3659

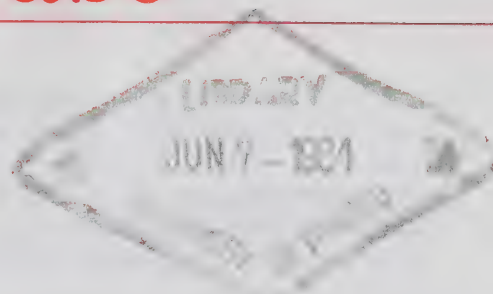
Ce texte est également disponible en français

CAI
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-1126

news release

For release

May 25, 1984



APPOINTMENTS TO THE SCIENCE COUNCIL

OTTAWA---The Honourable Donald J. Johnston, Minister of State for Science and Technology and for Economic and Regional Development, today announced the appointment of Mr. William H. (Lou) Reil of Islington, Ontario, Dr. Rose Sheinin of Toronto and Lieutenant-Colonel Winslow Case of Sudbury, Ontario to the Science Council of Canada. In addition, Mr. Johnston announced the appointment of Dr. Vaira Vikis-Freibergs of Montreal as Vice-Chairman of the Council.

Mr. Reil is President of Space Tech Industries of Rexdale, Ontario and has been a leader in the Canadian aerospace machining business for many years. He is the Director and Honourary Secretary of the Air Industries Association of Canada.

Dr. Rose Sheinin, who is Professor and Chairman of the Department of Microbiology and Parasitology in the Faculty of Medicine at the University of Toronto, is recognized world-wide for her outstanding investigations into cancer viruses.

Lieutenant-Colonel Winslow Case is a member of the Electrical/Electronics/Industrial Instrumentation Faculty at Cambrian College in Sudbury, Ontario. He was appointed to the Order of Canada in 1974 for his services to education and youth and was awarded the Queen Elizabeth II Silver Jubilee Medal in 1977.

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Dr. Vaira Vikis-Freibergs, who is Professor of Psychology at the University of Montreal, is well-known for her research into the cognitive processes, psycholinguistics and psychopharmacology. She has written numerous technical reports and articles on experimental psychology, literature, folklore and psycho-social phenomena.

The Science Council of Canada was established in 1966 to provide both the government and the public with an assessment of science and technology policy in this country. An integral part of its mandate is to improve public awareness of the major issues in science and technology.

-30-

For more information, please contact:

Pierre Bergeron
Science Council of Canada
996-6730 / 996-1729



Minister of State

Ministre d'État

Science and Technology
Canada

Sciences et Technologie
Canada

Government
Publications

SAI
-1426

news release

For release August 31, 1984

MINISTER TO OPEN COMMONWEALTH SCIENCE COUNCIL MEETING



OTTAWA---The Honourable Edward C. Lumley, Minister of State for Science and Technology, will officially open the Commonwealth Science Council's (CSC) biennial meeting on Tuesday, September 4 in Ottawa.

"The Commonwealth Science Council has consistently promoted multilateral and regional cooperation in science and technology," said Mr. Lumley. "This cooperation has not only assisted each country in developing its own national capabilities, and in the effective dissemination and implementation of technological solutions, but it has also allowed us to work together to meet the worldwide technological challenge of the current and future decades."

The CSC's 13th biennial meeting will be the first ever held in Canada. Dr. Louis Berlinguet, Chief Science Advisor to the federal government and Secretary to the Ministry of State for Science and Technology, is the Council's first Canadian chairman. A highlight of the meeting will be the review of a report for an expanded program of scientific cooperation among the CSC nations.

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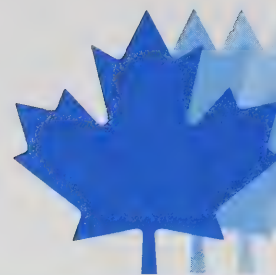
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The CSC is an autonomous inter-governmental group dedicated to the enhancement of natural scientific and technological capabilities through Commonwealth cooperation. Its programs enable scientists to undertake research, training and information exchange to solve developmental problems and enlarge their professional experience, on a cooperative basis.

The meeting, which will take place from September 4 - 10, will be attended by 30 of the Council's 31 member nations.

-30-

For more information, please contact
Bruce Stuart
(613) 996-0326 ext. 849



News Release

For release

February 18, 1985

CA1

- N26

RE-APPOINTMENT TO NATURAL SCIENCES AND ENGINEERING RESEARCH COUNCIL

OTTAWA - The Honourable Tom Siddon, Minister of State for Science and Technology, today announced the re-appointment of Dr. E.G. Manning to the Natural Sciences and Engineering Research Council.

Dr. Manning is a Professor of Computer Science at the University of Waterloo (U of W) and is Director of the University's Institute for Computer Research. Between 1973 and 1982 he served as Director of the Computer Communications Network Group at the U of W.

A graduate of the University of Waterloo (B.Sc, M.Sc., Applied Mathematics) and the University of Illinois (PhD, Electrical Engineering), Dr. Manning has served as a Project Officer for Computer Applications and Technology with the Science Council of Canada. In addition, he has worked as an Assistant Professor and Ford Fellow at the Massachusetts Institute of Technology (MIT) and as a



member of the technical staff of Bell Telephone Laboratories in the United States. In 1984, Dr. Manning was elected Fellow of the Institute of Electrical and Electronics Engineering (IEEE) in recognition of his contribution to the diagnosis and simulation of faults in digital systems.

Dr. Manning was first appointed to the Natural Sciences and Engineering Research Council (NSERC) on December 3, 1981.

NSERC is a major federal granting agency that supports Canadian research through programs of grants to university professors for research and research infrastructure, scholarships and fellowships for the development of highly qualified manpower, and grants for cooperative R&D activities between universities and Canadian industries.

For more information, please contact:

Marilyn Taylor
Natural Sciences and Engineering Research Council
(613) 995-5992



News Release

For release

CA1
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-N26

March 6, 1985



UNIVERSITY R&D GETS \$20 MILLION BOOST THROUGH NSERC

OTTAWA--The Honourable Tom Siddon, Minister of State for Science and Technology, announced today that the federal government has allocated an additional \$20 million to the 1984-85 budget of the Natural Sciences and Engineering Research Council (NSERC), Canada's major research granting agency. The additional funds will bring the total investment by Council in university research in 1984-85 to \$311.6 million. NSERC will use the additional \$20 million to respond to some of the 1400 applications for research equipment it is currently reviewing.

In making the announcement, the Minister reiterated an earlier commitment he had made in his statement to the Standing Committee of Parliament on Miscellaneous Estimates, on December 4, 1984.

"The statement I have made to you this morning is a reflection of this government's ongoing commitment to ensure an adequate supply of well-trained, scientifically prepared manpower and to also continue the advancement of the frontiers of knowledge which can only be achieved within our university institutions."

"...I make my commitment to see that the requirements of the Council are met by way of an additional supplementary estimate."

Dr. Siddon emphasized that, given the present economic climate and the federal government's commitment to reduce the deficit, the allocation of \$20 million to NSERC at this time is a significant indication of the government's ongoing support for R&D in Canada.

In the coming months, the Council will submit its second Five-Year Plan to the government. Minister Siddon noted that it was the Progressive Conservative government in 1979 that approved the Council's first Five-Year Plan.

"R&D is fundamental to our overall plan for economic and social development in Canada and the success of NSERC's programs in the universities is a prerequisite to that national effort," he said. "The second Five-Year Plan will be reviewed in that context."

For further information, contact:

Arnet Sheppard
Information Officer
NSERC
(613) 995-5992



News Release

CA1
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For release - N26 March 11, 1985

APPOINTMENTS TO THE SCIENCE COUNCIL

OTTAWA - The Honourable Tom Siddon, Minister of State for Science and Technology, today announced the appointment of Dr. James Clayton Gilson of Winnipeg, Manitoba and Dr. Michael Burt of Fredericton, New Brunswick, to the Science Council of Canada.

Dr. Gilson is a professor of agricultural economics at the University of Manitoba and has held several faculty positions, including Head of the Department of Agricultural Economics, at the university. He is also a member of the Rh Institute in Winnipeg and the Canada West Foundation in Calgary and was a member of the Science Council from 1970 to 1973.

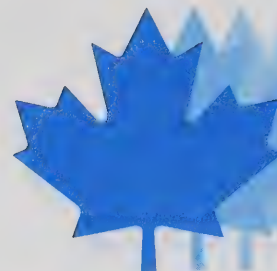
Dr. Burt is Chairman of the Department of Biology at the University of New Brunswick. He was awarded a NATO Senior Scientist Research Grant in 1978 and presently

serves as second vice-president of the World Federation of Parasitologists and as a director of Huntsman Marine Laboratories.

The Science Council of Canada was established in 1966 to provide both the government and the public with an assessment of science and technology policy in this country. An integral part of its mandate is to improve public awareness of the major issues in science and technology.

For more information, please contact:

Pierre Bergeron
Science Council of Canada
(613) 996-6730



News Release

For release

CAI
S
- NSC March 11, 1985

APPOINTMENTS TO THE NATURAL SCIENCES AND ENGINEERING RESEARCH COUNCIL

OTTAWA - The Honourable Tom Siddon, Minister of State for Science and Technology, today announced the appointment of Dr. J.B. Rice of Brandon, Manitoba, Mrs. Claudette MacKay-Lassonde of Islington, Ontario and Dr. Robert Scott of Saint John, New Brunswick to the Natural Sciences and Engineering Research Council of Canada (NSERC).

Dr. Rice is a professor and Chairman of the Department of Physics and Astronomy at Brandon University. His research interests include stellar astronomy and computer software for data handling.

Mrs. MacKay-Lassonde is in charge of the Planning and Control Department of Ontario Hydro. She has worked as an audit engineer with Atomic Energy of Canada Limited and a nuclear engineer with the Bechtel Power Corporation of San Francisco, California.

Dr. Scott is a professor of electrical engineering and Director of the Bio-Engineering Institute at the University of New Brunswick. He has served as a visiting scientist with National Health and Welfare Canada and is a consultant in rehabilitation engineering at the Ontario Crippled Children's Centre.

NSERC is a major federal granting agency that supports Canadian research through programs of grants to university professors for research and research infrastructure, scholarships and fellowships for the development of highly qualified research manpower, and grants for cooperative R&D activities between universities and Canadian industries.

For more information, please contact:

Marilyn Taylor
Natural Sciences and Engineering Research Council
(613) 995-5992



News Release

For release

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- N26

March 11, 1985

APPOINTMENTS TO THE NATIONAL RESEARCH COUNCIL

OTTAWA - The Honourable Tom Siddon, Minister of State for Science and Technology, today announced the appointment of Dr. Gren Yuill of Winnipeg, Manitoba, Mr. Kenneth Hammill of Guelph, Ontario and Dr. George Jenkins of Oromocto, New Brunswick, to the National Research Council of Canada.

Dr. Yuill is the President of Lion Industries Ltd. and G.K. Yuill and Associates Ltd., both of Winnipeg. He has been involved in many engineering projects involving the application of thermodynamics and heat transfer and has carried out many energy conservation projects in new and existing buildings.

Mr. Hammill is Vice-President and General Manager of Omark Canada Limited, a manufacturer of chain-saw components. He is active in the Guelph community, serving as an alderman, Chairman of the Special

Committee on the Construction of Major Recreational Facilities and on the board of the Guelph General Hospital and the Guelph Junction Railway.

Dr. Jenkins is the President of Process Technology Limited and PTL Research Limited. He is a former member of the scientific staff for Bell Northern Research, served as an industrial hygiene consultant to the Government of Canada (1976-1982) and is a member of the Chemical Institute of Canada and the Canadian Society for Chemical Engineering.

The National Research Council is an independent research agency established by Parliament in 1916 to undertake, assist and promote scientific and industrial research to further Canada's economic and social development. The NRC coordinates research interests of government, industry and universities.

For more information, please contact:

Dr. Clive Willis
Secretary General
National Research Council
(613) 993-9244



News Release

For release

March 20, 1985

INTERIM SPACE PLAN FOR CANADA ANNOUNCED

OTTAWA--The Honourable Tom Siddon, Minister of State for Science and Technology, the minister responsible for overall space policy and planning, today announced details on an Interim Space Plan for Canada.

"The Interim Plan is the first step in ensuring that Canadians will continue to benefit from the development and use of space technology" Minister Siddon said. "The next step will come at the end of the year with the development of a long-term Strategic Space Plan that will identify strategic thrusts, propose strategies for increasing industrial competitiveness and recommend program priorities and funding" he added.

The main features of the Space Plan include:

- acceptance of the invitation of the President of the United States to join the Space Station Program;

- support for the implementation of a commercial mobile Communications Satellite System (MSAT);
- continued development of a remote sensing satellite for resource monitoring and navigation (RADARSAT);
- a commitment to maintain and develop Canadian capabilities in space;

Space Station project definition will cost \$8.8 million in 1985-86, bringing Total Space Program funding to 194.1 M. as shown below.

	<u>1985/86</u>
	(\$M)
Technology Development	60.3
Remote Sensing	73.5
Communications	38.1
Space Science	<u>22.2</u>
Total	194.1

For additional information, please contact:

Mr. Mac Evans
Director
Space Policy and Plans
Ministry of State for Science and Technology

(613) 996-0326

INTERIM SPACE PLAN (1985/86)

INTRODUCTION

The Canadian Space Program consists of activities conducted by several government departments and agencies. These activities are co-ordinated by the Interdepartmental Committee on Space (ICS). The ICS reports to the Minister of State for Science and Technology who has the responsibility for overall space policy and planning.

Space technology is becoming increasingly important to the economic development of the industrialized nations of the world. The potential for commercialization of space in many new fields (e.g. mobile communications, remote sensing, materials processing, biotechnology) provides the opportunity for the creation of new industries, the provision of new and improved services, and the establishment of substantial numbers of new and challenging jobs.

Canada has demonstrated its international competitiveness in the development and use of space technology. Our space industries are well placed to bring the benefits of space to Canada. The Interim Space Plan provides an early statement of the government's commitment to maintain and develop Canadian capabilities in space. It will allow Canadian industries to pursue international opportunities and will encourage private sector investment in R&D, facilities, and the commercialization of space.

The Interim Space Plan contains the following major features:

- (a) a commitment to maintain and develop Canadian capabilities in space;
- (b) a statement of the objectives of the Canadian Space Program;
- (c) the development of a long-term Strategic Space Plan by the end of 1985;
- (d) acceptance of the invitation of the United States to participate in the Space Station Program (conditional upon the results of project design and preliminary definition studies);

- (e) support for the implementation of a commercial Mobile Satellite Communications system;
- (f) continuation of the development of a proposal for the implementation of the RADARSAT program, including an in-orbit servicing option as a possible contribution to Space Station.

The Interim Space Plan provides funding for these activities in FY 1985/86 through the reallocation of existing resources. Final funding decisions for future years on these projects and other space initiatives will be included in the long-term Strategic Space Plan at the end of 1985.

THE INTERIM SPACE PLAN (1985/86)

Commitment of the Government to Space

The Canadian Government has affirmed its commitment to maintain and develop Canadian capabilities in space. The Interim Space Plan is the first step in this commitment. The next step will occur when a long-term Strategic Space Plan is adopted at the end of 1985. The government's commitment to space includes maintaining the development of three potential major space projects (MSAT, RADARSAT, and Space Station) so that final decisions can be taken on these projects at the end of 1985. Space program expenditures in 1985/86 will be almost \$195 million (including \$8.8 million for Space Station studies approved in the Interim Space Plan), an increase of about \$45 million (30%) over 1984/85 expenditures.

In making this commitment, the government is indicating the priority it attaches to the development of a viable space industry and the importance of satellite-based services to the economic development of the country. In return for this commitment, the government expects the private sector to increase its investments in space so that the economic potential of space can be realized.

Objectives of the Canadian Space Program

To guide the development of the Canadian Space Program, the government has established the following broad objectives for the Program:

- (a) to ensure that the potential of space technology for practical applications to meet Canadian needs is fully developed;
- (b) to encourage the development of competitive space industries; and
- (c) to ensure that Canada maintains a position of excellence in the world-wide scientific exploration of space.

Development of a long-term Strategic Space Plan

Canada does not have the financial or human resources required to be at the forefront of all areas of space technology. Our success in the past has stemmed from our ability to focus our resources on a few areas where the probability of achieving substantial benefits was the highest. The advent of the Space Station era will have a profound effect on the way in which business in space is conducted. Now is the time for Canada to take stock of the opportunities and of our capabilities so that we can be sure that our limited resources will be applied effectively in the future.

To this end, the Minister of State for Science and Technology will develop by the end of 1985 a long-term Strategic Space Plan for consideration by the government. This Plan will identify strategic thrusts for the Canadian Space Program, propose strategies for increasing industrial competitiveness, and recommend program priorities. The Plan will assist the government decide on the various options that will be under consideration for future funding of the major space projects.

Participation in Space Station

The government has decided to accept the invitation of the United States to participate in the Space Station Program. A total of \$8.8 million has been allocated in FY 1985/86 to carry out project design and preliminary definition studies (phase B) to develop specific proposals for Canadian participation. Several options have been identified as a result of studies to date. These will be further defined so that the relative cost/benefits can be assessed. A decision on the elements of our specific participation in phases C/D will be required by the end of 1985. Our participation beyond phase B is conditional upon the results of the phase B studies.

Space Station will be the predominant civilian space initiative of the remainder of this century and will alter dramatically many of the established ways of operating in space. Canadian participation would permit us to maintain and improve our competitiveness in a number of leading-edge space technologies. All of our international partners have decided to participate which will afford us further opportunities to develop new business relationships and cooperative programs with the world's major space nations.

A description of Space Station, the Canadian phase B studies, and the options for Canadian participation are described in the accompanying paper on Space Station prepared by the National Research Council.

Support for MSAT

The government supports the implementation of a commercial mobile communications satellite (MSAT) system for Canada by 1990. The program is to be undertaken in cooperation with the United States, as an industry-led joint endeavour involving Telesat Canada, a U.S. commercial satellite operator, the Department of Communications (DOC) and NASA. Canadian government support is subject to satisfactory negotiation of cooperative business arrangements by the private sector, and to final funding approval later this year for the level of federal government participation in the program.

During the coming months DOC will be providing support to Canadian industry for the further development of the required satellite and ground terminal technologies, as well as continued planning of a post-launch program of applications trials to stimulate market growth, and further policy development.

MSAT, which will ensure equality of access to basic mobile telephone and radio service for Canadians outside urban areas, is of strategic importance to the economic development of remote and rural areas of Canada and is a high priority for further development of Canada's telecommunications system. Further details on the MSAT program are contained in the attached paper produced by DOC.

Continuation of the RADARSAT program

The government has decided to continue the development of a proposal for implementing the RADARSAT program. The proposal is to include an in-orbit servicing option as a possible contribution to Space Station. The proposal is to be ready by the end of 1985.

The RADARSAT program is in the middle of its program definition studies. The system under study consists of a remote sensing satellite and related ground receiving and data processing facilities that would produce maplike images of the earth day or night regardless of cloud or weather conditions. The system would provide information essential for the safe and efficient navigation of ships in the ice-infested waters off Canada's north and east coasts and would produce a world set of stereo radar images for geological assessment of mineral resource potential. Data would be produced that would improve weather and seastate forecasts and assist in monitoring wheat crops.

Additional details on the RADARSAT program are contained in the accompanying paper produced by the Department of Energy Mines and Resources.

BACKGROUND INFORMATION ON THE CANADIAN SPACE PROGRAM

Overview of the Program

The Canadian Space Program consists of activities in the following program areas: technology development; remote sensing; communications; and space science. The following table shows Space Program expenditures for each of the program areas for the period 1981/82 to 1985/86 (the expenditures for 1985/86 are estimated based on the Interim Space Plan).

Total Space Program Expenditures
(millions of budget year dollars)

<u>Program Area</u>	<u>81/82</u>	<u>82/83</u>	<u>83/84</u>	<u>84/85</u>	<u>85/86</u>	<u>Total</u>
Technology Development	38.8	45.0	50.9	44.1	60.3	239.1
Remote Sensing	26.3	39.1	37.4	48.3	73.5	224.6
Communications	19.8	25.8	25.5	35.7	38.1	144.9
Space Science	<u>11.8</u>	<u>12.8</u>	<u>17.4</u>	<u>23.1</u>	<u>22.2</u>	<u>87.3</u>
TOTAL	96.7	122.7	131.2	151.2	194.1	695.9

Technology Development Program: Activities in this program area include the development of new technologies and products in Canadian industry to meet domestic and export market needs, the provision of national facilities for use by government and industry, studies of Canadian participation in Space Station, and the Canadian Astronaut Program. Advanced communications satellite payloads and components, solar power generators, and the development of CANADARM are examples of new technologies and products that have been supported. Canadian participation in the OLYMPUS communications satellite program of the European Space Agency (ESA) and maintenance and operation of the David Florida Laboratory for the integration and testing of satellites and space components are also included in this program area.

Remote Sensing Program: The use of satellites for weather forecasting, management of resources, environmental monitoring, and navigation are important applications of Canada's remote sensing capabilities. Imagery of the earth is received from a number of satellites (owned and operated by other countries), processed into data products and distributed for use by governments and the private sector. Research is conducted to enhance the use of remote sensing technology. This program area includes Canadian participation in the Earth Resources Satellite program of ESA and the development in Canada of the RADARSAT program.

Communications Program: This program area includes the development and demonstration of new applications of communications satellite technology. Examples include the development of the Mobile Satellite (MSAT) program, investigation of concepts for direct broadcasting via satellite, and the development and experimental use of satellite-aided search and rescue systems (SARSAT). Research is also conducted into new technologies for satellite communications.

Space Science Program: Canadian scientists (government and university) are active in studies concerning space plasma physics and upper atmosphere physics and chemistry. These are traditional fields of research in which Canada enjoys an international reputation for scientific excellence. Activities in this program area provide opportunities for Canadians to participate in international space science programs. In addition, Canadian industry is able to participate in the development and construction of state-of-the-art space instrumentation.

Benefits of the Canadian Space Program

Canada was the third nation to enter the space era when the ALOUETTE I scientific satellite was launched in 1962. We have been able to build on this leadership to ensure that Canadians are able to benefit from the development and application of space technology. By world standards, the Canadian Space Program has been an outstanding success. With a relatively low level of expenditure (eighth in the world in terms of GNP, slightly ahead of Belgium and the Netherlands) we have become one of the largest users of space systems and have developed a world-class, export-oriented space industry. The development and use of space technology is one of the high technology areas in which Canada excels.

Because of our geography and demography, the application of space technology has become an essential element of our national life. Communications satellites are now integral components of our national communications infrastructure. They are essential for commerce and provide important cultural links across the country. Remote sensing satellites are improving the management of natural resources such as forestry, agriculture, oceans, and fisheries, and are becoming increasingly important to the mining industry. Weather satellites

permit improved weather forecasts which benefit all Canadians, particularly the resource-based industries. Satellites are assisting navigation and are saving lives and costs in search and rescue operations. Canada's direct involvement in the development of the space infrastructure through such contributions as CANADARM to the Space Shuttle has allowed our industry to forge important international links and to achieve international recognition and sales of its technology.

The Canadian approach to the use of space has been to encourage the development of viable space industries in Canada. This approach is proving to be singularly successful. A recent study by the OECD identified Canada as the only country in the world where the space industries sell more than the government spends on its space program. In recent years, our space industries have, in aggregate, been growing at more than 50% per year and achieved sales of about \$300 million in 1983. More than 70% of the sales are exported. The industries are almost entirely owned by Canadians (90%, compared to an average of 70% for all non-financial corporations in Canada). The sales of the space industries contain an estimated 75% Canadian value-added content (which is much higher than the 37% average for Canadian manufacturers as a whole). The industries are regionally distributed (Quebec-41%; Ontario-39%; and the West-20%) and currently employ directly over 3000 highly skilled technical and professional people.

Our activities in space have had considerable spin-off economic benefits. Space activities demand state-of-the-art capabilities in systems engineering, telecommunications, electronics, robotics (including artificial intelligence), materials, and engineering for harsh or extreme environments. This knowledge is often diffused into other sectors through the movement of people from the space program.

There are many strategic benefits Canada receives from having a successful space program. Space is a high profile, international arena where the industrially developed nations display their technological prowess for the rest of the world to see. The high international profile created by our space program is an important factor in opening doors for other high technology industries.

From its beginning, the Canadian Space Program has had a strong international orientation. Most of our space projects have been undertaken as cooperative joint ventures with other nations, particularly the United States and the European Space Agency (ESA). This cooperation permits Canada to broaden the scope of its space program, both technically and financially. It forges lasting and important government-to-government links, helps to ensure Canadian access to major new technological developments abroad, and encourages international industrial partnerships. A particularly visible example of this is CANADARM, which has led to follow-on production orders for all shuttles, other business for our industry and the invitation to fly Canadian astronauts on the shuttle.



News Release

CAI
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-N26
For release

April 24, 1985

APPOINTMENT TO THE NATIONAL RESEARCH COUNCIL



OTTAWA--The Honourable Tom Siddon, Minister of State for Science and Technology, today announced the appointment of Dr. James Mardon of New Westminster, British Columbia to the National Research Council of Canada (NRC).

Dr. Mardon is the President of Omni Continental Limited, a Vancouver-based consulting engineering company involved in the pulp and paper industry. He previously served as Technical Director for the Pulp and Paper Group of MacMillan Bloedel Limited.

A graduate of Selwyn College (Cambridge, England) and the College of Science and Technology (Manchester, England), Dr. Mardon has designed a number of training systems to bridge the gap between university and industry and served as Chairman of the Training and Education Committee of the Technical Section of the Canadian Pulp and Paper Association.

The National Research Council is an independent research agency established by Parliament in 1916 to undertake, assist and promote scientific and industrial research to further Canada's economic and social development. The NRC coordinates research interests of government, industry and universities.

For more information, please contact:

Dr. Clive Willis
Secretary General
National Research Council
(613) 993-9244



News Release

For release

April 29, 1985

CA
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-N26



APPOINTMENT TO THE SCIENCE COUNCIL

OTTAWA -- The Honourable Tom Siddon, Minister of State for Science and Technology, today announced the appointment of Dr. Ian G. MacQuarrie of Cornwall, Prince Edward Island to the Science Council of Canada.

Dr. MacQuarrie is an associate professor of biology at the University of Prince Edward Island and has been active in the development and teaching of courses in environmental education at many levels.

A graduate of Dalhousie University (B. Sc., Honours Biology and M. Sc., Botany) and the University of London, King's College (Ph. D., Botany), he has served as Chairman of the P.E.I. Land Use Commission and was founder and first president of the P.E.I. Nature Trust.

The Science Council of Canada was established in 1966 to provide both the government and the public with an assessment of science and technology policy in this country. An integral part of its mandate is to improve public awareness of the major issues in science and technology.

For more information, please contact:

Pierre Bergeron
Science Council of Canada
(613) 996-6730



News Release

For release May 13, 1985

CAI
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-N/26

APPOINTMENT TO THE NATURAL SCIENCES AND ENGINEERING RESEARCH COUNCIL

OTTAWA -- The Honourable Tom Siddon, Minister of State for Science and Technology, today announced the appointment of Dr. Roy Lindseth of Calgary, Alberta to the Natural Sciences and Engineering Research Council of Canada (NSERC).

Dr. Lindseth is the founder and President of Teknica Resource Development Limited of Calgary and is well-known in the petroleum industry for his fundamental work in digital seismic signal processing.

He was an early leader in frequency domain operations, geological modelling and inversion and was the inventor of the "Seislog" process for stratigraphic interpretation. In December 1984, Dr. Lindseth received



an Honorary Membership in the Society of Exploration Geophysicists for his original work in geophysical developments. He has served as a member of NSERC's Electrical Engineering Grant Selection Committee for the past three years.

NSERC is a major federal granting agency that supports Canadian research through programs of grants to university professors for research and research infrastructure, scholarships and fellowships for the development of highly qualified research manpower, and grants for cooperative R&D activities between universities and Canadian industries.

For more information, please contact:

Mireille Brochu
Secretary General
Natural Sciences and Engineering Research Council
(613) 995-5896



Canada

Minister of State
Science and Technology

Ministre d'État
Sciences et Technologie

Government
Public



News Release

For release

CAI

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- N26

July 25, 1985

SCIENCE COUNCIL TO BE CONSULTED MORE OFTEN



Ottawa ---The Honourable Tom Siddon, Minister of State for Science and Technology, met today with Dr. Stuart Smith, Chairman of the Science Council of Canada, to inform him that the Council would be consulted more often in the future on scientific issues of national importance.

Minister Siddon highlighted the need to maintain an arm's length agency that can provide the federal government with external, dispassionate advice as well as initiating work it deems important to the larger interests of science and technology.

"The Council can be a valuable source of independent advice on a wide range of important scientific issues confronting the government", said Minister Siddon. "It will be consulted regularly in the future, and it, in turn, will enjoy more influence over emerging national policies for science and technology."

The Minister said that new management initiatives in respect to the Council, announced in the May 23 Budget, will involve those sections of the Science Council of Canada Act (12(1), 12(2), 13(1)) which allow the Minister to make references to the Council. The Minister noted that previous governments had referred very few matters to the Council, suggesting that this represented a missed opportunity to capitalize on the wealth of talent and experience on the Council.

The Minister specifically requested the Science Council to provide the government its considered advice on:

- 1) the optimum use of government incentives to accelerate private sector innovation and the transfer of new technology, within the context of new initiatives announced on May 23, 1985;
- 2) an external review process to monitor the relevance and quality of research in government laboratories;
- 3) methods of ensuring adequate support of university research and the training of future researchers; and
- 4) the optimum size and scope of the Canadian Space Program to synergize innovation in leading-edge technologies.

"As these new responsibilities must be assumed in tandem with resource reductions, they will require us to focus our efforts as indicated in the Budget announcements", said Dr. Siddon. "I look forward to working with the Council to meet this challenge."

The Science Council of Canada will determine the timing and nature of resource reductions in consultation with the Treasury Board and will produce a plan for achieving these reductions consistent with the May 23 announcements.

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For more information, please contact:

Mr. Dick Doyle
Chief Policy Advisor
(613) 993-1368



News Release

CAI
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For release September 16, 1985
-N26



SCIENCE AND TECHNOLOGY MINISTERS MEET AT MEACH LAKE

MEACH LAKE -- Under the chairmanship of the Honourable Tom Siddon, Minister of State for Science and Technology, Ministers responsible for science and technology in provincial and territorial governments, met at Meach Lake on Friday, September 13, 1985 to review progress towards the development of a Canadian Policy for Science and Technology.

"Canada faces strong international economic challenges and our ability to compete will determine both the number and quality of jobs available to Canadians", said Minister Siddon. "We have recognized the vital importance of science and technology to meeting these challenges. I am looking forward to the benefits that will result from the agreement we have reached here today."

Ministers agreed that Canada needs to have the best possible training for our future researchers to be able to meet the projected demands in the sectors essential to economic renewal - industry, labour, universities and government. In particular, Canadian industry will need highly-qualified personnel trained at universities and colleges to remain competitive in an increasingly technological future.

Both the federal government's contribution to university research through the research granting councils and the provincial governments' role in university education and research were recognized as essential to the strength of Canadian universities. Ministers also noted the importance of the transfer of technology from universities to industry and the need for greater cooperation between the two.

The Ministers also agreed to convene a representative forum to discuss major issues for Canada in the development of a Canadian Policy for Science and Technology. The forum is expected to take place in the spring of 1986.

For further information, please contact:

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A/Director, Communications
Ministry of State for Science and Technology
(613) 990-6494



News Release

For release

October 11, 1985

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APPOINTMENT TO THE NATURAL SCIENCES AND ENGINEERING RESEARCH COUNCIL

OTTAWA -- The Honourable Tom Siddon, Minister of State for Science and Technology, today announced the appointment of Dr. David A. Pink of Antigonish, Nova Scotia, to the Natural Sciences and Engineering Research Council (NSERC).

Dr. Pink is a professor and former chairman of the Department of Physics at St. Francis Xavier University. A well-known researcher and reviewer in the area of physics, Dr. Pink has written or co-authored over fifty articles in the last twenty years. He has been a recipient of a number of research grants from various organizations to assist him in his work.

NSERC is a major federal granting agency that supports Canadian research through programmes of grants to university professors for research and research

infrastructure; scholarships and fellowships for the development of highly-qualified research personnel; and grants for co-operative research and development activities between Canadian universities and industries.

For further information, please contact:

Mireille Brochu
Secretary General of Council
Natural Sciences and Engineering Research Council
(613) 995-5896



News Release



For release October 15, 1985

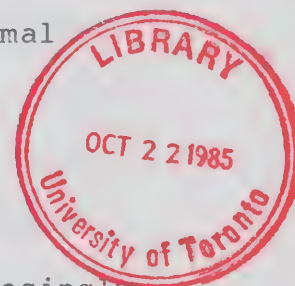
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INTERNATIONAL MEETING OF SCIENCE AND TECHNOLOGY MINISTERS

OTTAWA -- The Honourable Tom Siddon, Minister of State for Science and Technology, will chair an informal international meeting of science and technology ministers at Meech Lake on October 20-21, 1985.



"As we see science and technology becoming increasingly internationalized, we can all appreciate the value of discussions that will promote a greater mutual understanding", said Minister Siddon. "I am sure that we will all benefit from the exchange of ideas that this meeting will allow."

In addition to Canada, Australia, the Federal Republic of Germany, Italy, Japan, the United Kingdom and the United States will be represented at the meeting. Ministers will discuss the contribution science and technology can make to economic and social development

and consider the measures being implemented in their countries. Themes to be addressed during the day and a half long meeting will include: the planning and coordination of science and technology; policies for promoting promising technologies and industries; and the role of government vis-à-vis industry in industrial R&D and innovation.

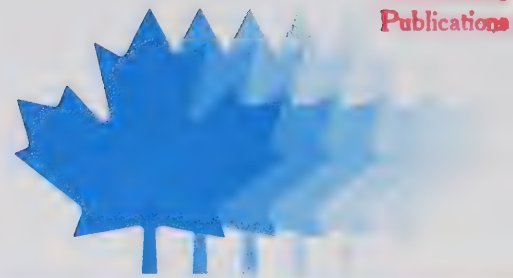
This informal meeting is designed to promote a better understanding among ministers responsible for science and technology in their respective countries, an understanding that should foster better international cooperation in the future.

For more information, please contact:

Marc-André Charlebois
Director, Communications Branch
Ministry of State for Science and Technology
(613) 990-6494



News Release



For release November 22, 1985

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APPOINTMENTS TO THE NATIONAL RESEARCH COUNCIL

OTTAWA -- The Honourable Frank Oberle, Minister of State for Science and Technology, today announced the appointment of Dr. Giampaolo Sassano and the reappointment of Mr. Jean-Guy Fredette, both of Montreal, Quebec, to the National Research Council of Canada (NRC).

Dr. Sassano is an Associate Professor at Concordia University in Montreal specializing in economic geology and mineral deposits. A graduate of the University of Alberta (Ph.D. in Economic Geology) and the Università degli Studi di Milano, Italy (Doctorate in Geological Science), Dr. Sassano has extensive geological research and field work experience and has published numerous articles and papers.

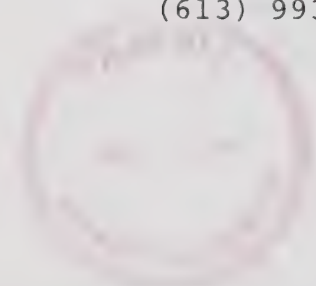


Mr. Fredette is a graduate in law from the University of Montreal and has had extensive experience in policy development and management in the field of energy and mineral resources. For several years he served as Deputy Minister of the Department of Natural Resources, Province of Quebec. Mr. Fredette is currently the Vice-President of the Montreal Engineering Company Ltd. and is a member of several professional law and mining associations.

The National Research Council is an independent research agency established by Parliament in 1916 to undertake, assist and promote scientific and industrial research to further Canada's economic and social development. The NRC coordinates research interests of government, industry and universities.

For further information, please contact:

Dr. Clive Willis
Secretary General
National Research Council
(613) 993-9244





News Release

For release

November 22, 1985

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APPOINTMENTS TO THE SCIENCE COUNCIL OF CANADA

OTTAWA -- The Honourable Frank Oberle, Minister of State for Science and Technology, today announced the appointment of Dr. Bernard M. Leduc of Outremont, Quebec, Dr. Andrew J. Szonyi of Toronto, Ontario and Dr. G.S.H. Lock of Edmonton, Alberta to the Science Council of Canada. Mr. Oberle also announced the reappointment to the Council of Dr. Geraldine Kenny-Wallace of Toronto, Ontario.

Dr. Leduc received his medical degree from the University of Montreal and his Ph.D. from Oxford University. He is currently a professor in the Department of Gynecology and Obstetrics in the Faculty of Medicine at the University of Montreal, as well as the Vice-President of the Association des médecins de langue française. Dr. Leduc is a member of several professional associations and learned societies and has authored numerous articles and reports in his area of expertise.



A native of Hungary, Dr. Szonyi received his M.A. Sc. and Ph.D degrees in chemical engineering from the University of Toronto. He is currently a Professor in the Faculties of Management Studies and Applied Science and Engineering, as well as Director of the Engineering and Management Centre, at the University of Toronto. Dr. Szonyi is author of a number of publications and a frequent speaker on various aspects of financial and business management.

Dr. Lock has over a quarter of a century of engineering and scientific research experience and a long-standing interest in the impact of technology on society. He has served as Director of the Boreal Institute for Northern Studies and as President of the Canadian Society for Mechanical Engineering. He is the author of numerous publications as well as being an award-winning poet and playwright. Dr. Lock is currently a Professor of Mechanical Engineering at the University of Alberta.

Dr. Kenney-Wallace has been Professor of Chemistry and Physics at the University of Toronto since 1980. A native of London, England, she was educated at the Royal Institute of Chemistry (London) and in Oxford where she began her research in physics and biophysics.

Dr. Kenney-Wallace is a member of several professional and learned societies and of the advisory boards of several U.S. journals. She was first appointed to the Science Council in 1983.

The Science Council of Canada was established in 1966 to provide both the government and the public with an assessment of science and technology policy in this country. An integral part of this mandate is to improve public awareness of the major issues in science and technology.

For further information, please contact:

Mr. E.V. Nyberg
Secretary of Council
and Director of Communications
Science Council of Canada
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News Release



November 25, 1985

For release

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APPOINTMENT TO THE NATURAL SCIENCES AND ENGINEERING RESEARCH COUNCIL

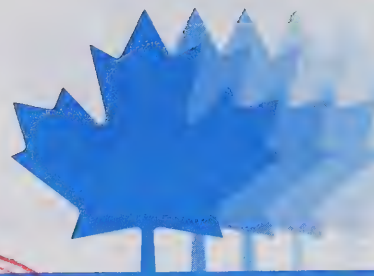
OTTAWA -- The Honourable Frank Oberle, Minister of State for Science and Technology, today announced the appointment of Mr. Allan R. Crawford of Vancouver, British Columbia, to the Natural Sciences and Engineering Research Council (NSERC).

Mr. Crawford is the founder and President of Anateck Electronics Ltd. of North Vancouver, British Columbia, which manufactures electronic instrumentation, and co-founder of Lumonics Research Ltd. of Ottawa, Ontario. In addition to his membership in a number of professional associations, Mr. Crawford is a member of the Board of Governors of the University of British Columbia and of the Board of Trustees for the Discovery Foundation for the Province of British Columbia.

NSERC is a major federal granting agency that supports Canadian research through programmes of grants to university professors for research and research infrastructure; scholarships and fellowships for the development of highly-qualified research personnel; and grants for co-operative research and development activities between Canadian universities and industries.

For further information, please contact:

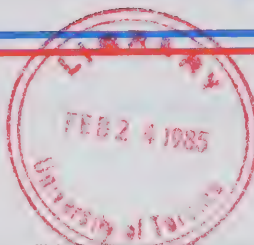
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Secretary General of Council
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– News Release

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For release - N26

February 13, 1986



INSTITUTE OF INDUSTRIAL AND MANUFACTURING TECHNOLOGY

OTTAWA -- In a move to bolster Manitoba's manufacturing industries, Health and Welfare Minister Jake Epp and Science and Technology Minister Frank Oberle today announced the establishment of a national high-tech centre at Science Place Canada in Winnipeg.

"The Canadian Institute of Industrial Technology clearly demonstrates the government's commitment to improving Canada's manufacturing technologies which are so essential for economic competitiveness and job creation," said Mr. Epp, Member of Parliament for Provencher.

The Institute will focus on industrial and manufacturing technology. Mr. Oberle, who is responsible for implementing the federal plan said, "The private sector will play a major part and space will be reserved for university and other public sector tenants".



A core group from the National Research Council will be charged with the responsibility for coordinating use of the facility. The Manitoba Research Council has been invited to join other tenants in creating a world-class centre of excellence for manufacturing technology.

"This kind of mix of private sector, university and government researchers will create a productive and dynamic environment for scientific exploration and innovation," Mr. Oberle said. Mr. Epp said that with the solid federal commitment, "it is the turn of industry, educational institutions, and the provincial government to join us in a serious effort to make the Institute a successful force for the economic renewal of our province."

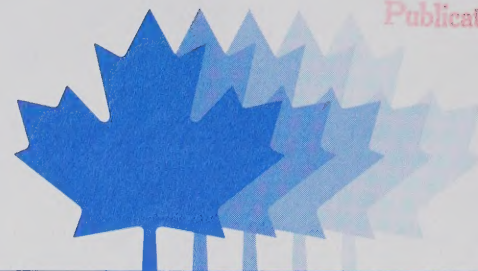
The Institute will have the capacity to channel its efforts into conducting industry-related projects in robotics, computer-aided design, computer-integrated manufacturing and production, and flexible manufacturing systems.

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For further information, please contact:

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News Release

For release

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- 1126

December 12, 1986

SCIENCE AND TECHNOLOGY MINISTERS MEET IN MONTREAL

MONTREAL -- Agreement on the broad outlines of a National Science and Technology Policy and the establishment of a Council of Science and Technology Ministers highlight results of today's ministerial meeting in Montreal.

The policy is subject to further refinement and review, particularly in the area of regional development, and then to ratification by governments. The Council's mandate and structure will be defined by a special federal/provincial/territorial Working Group.

"For the first time we have a national commitment on the objectives and thrusts of a policy to promote industrial innovation, technology diffusion and the development of advanced technologies so crucial to our country's future," said Conference Chairman, the Honourable Frank Oberle, Minister of State for Science and Technology. "This policy will help Canada both develop the human expertise demanded by technological development and make Canadians more aware of the personal and social importance of science and technology."

Mr. Pierre MacDonald, Quebec Minister for External Trade and Technology and host of this federal/provincial/territorial meeting, said: "Quebec has already recognized that science and technology will play a significant role in its economic and social development. I am pleased to find that my colleagues attending this conference also share this view. The implementation of a National Science and Technology Policy will allow all parties to take a cohesive approach in this crucial area."

Ministers agreed to meet again in early Spring to finalize the National Policy. Ministers expect the Council of Science and Technology Ministers to meet frequently over the next two years to implement a National Policy Action Plan.

It's our year!

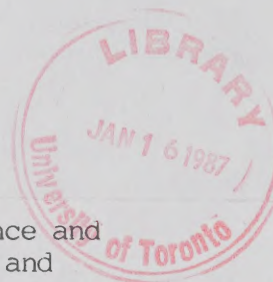


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in motion...in touch



en mouvement...au courant



The Action Plan will be developed by six federal/provincial/territorial working groups. The Plan would cover the following areas: increasing research and development; promoting basic research; helping small and medium-sized technologically-oriented firms; technology transfer and diffusion; developing government/university/industry programs on strategic technologies in the resource sector; and, the social impact of technological change.

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For additional information, please contact:

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